THE

BUFFALO SCHOOL ASSOCIATION.

Report on the Sanitary Condition of the Public Schools of Buffalo.

MADE BY THE
VISITING COMMITTEE OF THE ASSOCIATION
MARCH, 1898.

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THE VISITING COMMITTEE of the Buffalo School Association was appointed in June, 1896, as one of the standing committees of the Association. Except as its duties were indicated by its title, the committee was uninstructed and free to choose the direction which its work should take, and, for many reasons, it seemed best that that work should be limited at first to an investigation of the sanitary condition of the public schools. This limitation was especially in place inasmuch as the committee was convinced that the school instruction itself is rapidly improving under the able supervision of Mr. Emerson. A partial report was made last May, when the attention of the Association was called to certain defects which brooked no delay — such as the danger from fire in certain of our schools — and the full report then promised is now laid before you. We believe that the sanitary condition of our public schools, as herein shown, is such as to call for the careful consideration of our citizens.

Similar investigations have been carried on within the past year and a half at Boston, Cleveland, New Haven, Philadelphia, Washington, San Francisco and its two suburbs, Oakland and Berkeley, and your committee adopted, with some modifications, the blanks, prepared by sanitary experts, which had been used successfully elsewhere. These blanks covered such topics as Site, Building, Sanitaries, Ventilation, Heating, Cleaning, Health, — 92 questions, with subdivisions, being answered under these headings, for each school building in the city. In addition, a blank containing 27 questions, 14 of which had subdivisions, was used for individual school rooms, making an approximate total of 32704 questions, answers to which have been tabulated. This is an underestimate, as the subdivisions of the questions are not taken into account. As a rule, the investigation of a school was divided between two persons, 92 in all being engaged in the work. It is practically impossible to have such a mass of data entirely free from error, but every reasonable precaution has been taken in gathering and verifying it, and your committee believes that the statements which it now lays before you will

be found to be well within the facts. It is open to any citizen to verify or challenge them. The full reports upon the various schools, from which this is compiled, are at the Teachers' College, where they may be examined, while the original documents, the school buildings themselves, are also always at hand. The data are here summarized by topics, and the defects of each school are also summarized. Your committee wishes it to be clearly understood that its aim in this report is neither criticism for its own sake nor arraignment, but to lay before the School Association and, through that, before the citizens of Buffalo, a candid and impartial statement of a particular phase of the school problem in our city. Many of the conditions shown in this report continue to exist, notwithstanding recommendations from the Superintendent of Education which ought to have brought about their removal.

Before taking up specific topics, the committee desires to express publicly its appreciation of the services of the co-workers whose intelligent and public-spirited help made this investigation possible. It wishes also to thank the Mayor, the school Superintendent, the school Principals and teachers, for the courtesy and kindly co-operation with which, in almost every instance, the men and women who carried on this work were met.

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STANDARD.

In judging the sanitary condition of the school buildings the Committee has necessarily been guided by a standard. By standard is here meant, not the ideal building with the best modern equipments, but a building that is sufficiently well constructed and equipped, to avoid condemnation in any important respect. Many of the necessities in such a building are evident to any person. Some of them are especially worthy of mention, and are here given.

1. The school site should be at least as high as the surrounding ground and well underdrained. Sufficient space should be allowed to secure a reasonably large playground, and an abundance of light, air, sunshine, and freedom from noise from neigh-

boring buildings. This space should not be less than forty feet on each side.

2. The closets should be in separate buildings, or so shut off from other parts of the school building as to avoid any contamination of the air in the latter. They should be well ventilated; the floors should be of non-absorbent material; they should not be made of wood. The seats should be invariably separated from one another for the sake of privacy. No towels should be kept for promiscuous use, although some should be kept for use by individual children in cases of emergency.

3. Heating. Where hot-air furnaces are used, provision should be made for the evaporation of water, and the apparatus provided for that purpose should be used. The air should be brought from out of doors. Heating by stoves is objectionable. Maintenance of the proper temperature should rest upon one person — the janitor, under the supervision of the principal.

4. The system of ventilation adopted in each building should work, and should be used. The shaft intended for the exit of foul air should lead above the roof. Over each air-inlet and outlet there should be hung light ribbons to show the movement of the air current.

5. Three-story buildings that are not provided with ample halls and stairways properly distributed through the building, should be furnished with fire escapes.

6. The number of cubic feet of air space for each pupil should be 250. At least a few adjustable seats should be furnished to each room for the health and comfort of those who vary from the normal size.

7. Light should enter the rooms at the left and in the rear of the pupils. There should be an abundance of light, not only for the eyes of the pupils, but for the general wholesomeness of the building. Dim light and dark shadows are not friendly to cleanliness and health. No blackboards should be placed between windows. Thermometers should be furnished to all rooms. These should be hung in the center of the room about five feet from the floor, and should register 68°.

8. For school room walls, either calcimine or paint is preferable to wall-paper.

BUILDING SITES.

The sites of our school buildings are in general good, both in respect to the character of the soil upon which they are built and their surroundings. The exceptions, so far as soil is concerned, are those schools which stand on clay, imperfectly underdrained. School No. 26 is not only on clay soil, but stands on unpaved streets, one of which is without a sewer. It takes, naturally, "several days to dry the surface" after a rain. The report also declares that these streets, Milton and Wescott, are "never cleaned" in this neighborhood, except when the janitor of the school does it himself. One side of School No. 5 extends along Hydraulic Street, which is described as a mud street, and there is another unpaved street, Carroll, in the rear. Both of these are in very bad condition, spring and fall, and as No. 5 has no play-ground, its seven hundred pupils are practically forced into the streets, both in their comings and goings, and at playtime. This school would be greatly benefited if the streets were paved, for not only is their present condition unsanitary in itself, but the mud and refuse unavoidably brought into the school building are a serious difficulty, both from the practical and the hygienic points of view.

A few of our schools are unfortunate in their neighbors also. Of these schools five should have special mention. No. 2, the Terrace School, has a location which is ideally bad. It is one block from the Erie Canal, half a block from the tracks of the New York Central R. R., 70 feet from a saloon, with a four-story tenement house 7 feet from its play-ground, and foundries, machine shops and planing mills close at hand. No. 3, at Perry Street, near Illinois, is "completely surrounded by industries;" No. 5 is near a grist mill and factory; No. 41, at Broadway and Spring, has a malt-house, a distillery, and the Buffalo Forge Co.'s works in its vicinity, while the inconvenience that No. 47 has suffered from its neighbor, the shoe factory, is a matter of common knowledge. It is, of course, practically impossible to secure to each school such surroundings as it should have, and it is especially difficult to do so for schools which are now within the business sections of the city, but the matter is not one to be ignored. Certain objectionable features in the neighborhood of other schools can and should be promptly remedied.

Near No. 33 are stagnant pools of water, and water also stands in the excavations of the brick yards near No. 7. The play-grounds of five schools, Nos. 3, 11, 17, 25, and 40, are reported as in bad condition. In four out of these six cases the yards need resurfacing, and the difficulty with the other two could probably be as easily remedied. Six schools, Nos. 5, 10, 21, 24, 49, and the High School have no play-grounds at all. That is hardly a matter of importance in connection with the High School, and No. 24 has ample space secured to it in the Parade, at whose edge it stands. On the other hand, No. 21, on Hertel Avenue, which is described as "a country district school," has unlimited open country around it. That is the provision which is now relied upon in many of our schools. No. 9, for instance, on Bailey Avenue near Genesee, occupies, with its annex, almost the entire school lot. So do Nos. 52, 55, 57, and 58—all new schools. These last two schools, like No. 9, have now an abundance of vacant land in their immediate vicinity, which supplies this deficiency in the school equipment, but it is a resource that will be less available every year. The Committee recommends that it be the policy in the future to secure land for such schools while it is still cheap, for, desirable as are adequate play-grounds, they are not the most important consideration involved. Without such provision, the school's supply of light and sunshine may in the future be seriously interfered with, and, as has already happened in several instances, it may find itself in close proximity to neighbors that destroy its value as school property. No. 8 is an excellent example of the wiser policy. At the time the lot for that school was purchased land was cheap, and an ample tract was secured at about one-fifth of what it would now cost to insure that school the benefits in the way of light, air, sunshine and quiet which it enjoys.

BUILDINGS.

That many of the public school buildings in this city are in an unsatisfactory condition was shown very clearly in the recent discussion in regard to School No. 16. A leading member of the School Committee stated then that there were 15 or 16 other districts in which the people were also extremely dissatisfied with their school-houses, and to comply with their wishes would

probably cost about a million dollars. This is the clearest possible commentary on our school buildings. In consequence of Buffalo's failing in the past to provide sufficient accommodations for the increasing number of children in the public schools, these buildings have been for years overcrowded. Temporary relief has been sought by renting buildings which are practically all unfit for school use, and by putting up frame structures on the school lots — these buildings being also poorly adapted to the purposes which they are made to serve. The city has at last adopted a more liberal policy, and in the last four years 18 new schools have been erected, and the number of children in the annexes has fallen from 7,000 to 3,220. But the increase of school population goes steadily on, and still keeps ahead of the measures taken to provide for it. If the city should fail for one year to add to the school facilities, the schools would be as overcrowded as in 1893, when the building era began.

(*a*) OVERCROWDING.

Aside from the evidence of insufficient school accommodations furnished by the fact that 25 annexes are still in use, overcrowding is shown in three ways.

FIRST.—More than one-half of the schools are using rooms as class-rooms that were never intended for that purpose. Schools Nos. 4, 24, 40, 49 are using attic rooms; Nos. 5, 8, 15, 17, 18, 24, 30, 36, 37, 39, 41, 53, portions of the halls; Nos. 9, 24, 45, 49, 55, basements; Nos. 2, 17, 19, 56, cloak-rooms; in Nos. 5 and 41 the office is so used; in No. 43 the janitor's store-room and teachers' lunch-room; in No. 45 the library rooms, and in No. 49 a room formerly used as a lavatory. It is safe to say that few of these rooms are suitable for class-rooms. The principal and teachers at No. 4 complain that the lack of ventilation in the attic rooms is a serious evil, and similar complaints come from other schools. The basement rooms are especially lacking in most of the requirements that a modern school room should meet, and these other rooms which have been pressed into service are, in general, badly lighted, and defective in other ways.

SECOND.—There is a lack not only of school rooms, but of seats as well. Eighteen schools, exclusive of annexes, report more pupils than desks. Children sit two in a single seat, and

three in a double seat, while the further surplusage finds a place on the edge of the teacher's platform. No reference is made here to the annexes; when they are considered, the situation is much worse. It has been the policy for many years to dispose of as many children as possible in the ways described, and to huddle those that were left into these temporary school buildings.

THIRD.—The majority of the school rooms fail to furnish their occupants the proper cubic air space. A room intended for 40 may be made to furnish desk room for 60, but yet, by this last test, it may be overcrowded. There is no city ordinance on that point, but, according to the Board of Health, each child is entitled to 250 cubic feet of air space, the air of the room being changed every hour. The section on ventilation will show how well these requirements are met. The air space in some rooms falls as low as 83 or even 66 cubic feet, and, unfortunately, this happens but too often in those buildings where the ventilation is most defective, and where other factors contribute to vitiate the air.

(*b*) DRESSING ROOMS.

The provisions for the children's wraps also are unsatisfactory. That neither window-sills, stairways, unventilated halls nor fire-escapes are suitable places of deposit we would probably all agree — though all these expedients are used in our schools. We should probably also agree in condemning the practice of keeping the children's wraps in the school-rooms, though this arrangement is not infrequent. At No. 37, for instance, four class-rooms serve as cloak-rooms as well. The wraps hang under the blackboards, and in winter the surplus of waterproofs and umbrellas lies on the floor. In one of these rooms the rear line of seats is just 18 inches from the bare wall, so that, with the wraps in place, the children in these seats must be almost in contact with them. It is an arrangement which should not be tolerated, but is of many years' standing. It is to be found also at No. 2, No. 4, and in several annexes.

The method most in favor is that of cloak-rooms attached to the respective class-rooms, and opening into the common hall. This represents an advance over the other methods, but there are serious objections to such a plan. In the first place, these

cloak-rooms occupy space which is sorely needed for other purposes. To thrust yet more children into already overcrowded rooms or into dim basements, while sunny floor space is devoted to wraps, hardly seems a judicious management of a school's resources; but it is done again and again. No. 55 is a notable example. Each of its 17 grade rooms has a cloak-room, with an average floor space for each of 22 x 6 feet — spacious, clean, and flooded with sunshine. But the cubic air space per child in the respective class-rooms averages 183 feet, instead of the minimum requirement of 250, and 113 children are housed in basement rooms "insufficiently lighted on cloudy days."

Such cloak-rooms have been put into all of the new school-buildings, in spite of the lesson taught by the almost universal overcrowding, and in evident ignorance of the fact that they fail to meet the sanitary requirements which they should fulfill. For the problem is to put the child's wrap where it will take up the least room, where it will be secure, where it can be dried when necessary, and where odors, dampness, and the danger of infection from it will be reduced to the minimum; and these requirements are not met even by the best cloak-rooms in the city. We recommend that the system in vogue at Chicago, and at Springfield and Brookline, Mass., be investigated as offering a possible solution of the question. The children's wraps are there locked into closets which are furnished with special heating and ventilating apparatus.

(*c*) DESKS.

Adjustable desks are entirely wanting in nearly all of the schools. The desks that are used vary little in size, as a rule, in any one room. But in the lower grades of many schools there are large numbers of boys and girls of foreign parentage, just learning the English language, who are far behind their proper grade; these are very often compelled to sit in seats intended for children of half their age. As a consequence, they are not only tortured for the time being, but they are exposed to permanent injury. A very great improvement in this direction could be easily effected by placing more large desks in primary rooms and by shifting them about from year to year according to need. Adjustable desks — now beginning to be much used in other cities — would be a far better remedy still, and would cost little more.

(*d*) THE NEW BUILDINGS.

The need of adjustable seats is as noticeable in the new schools as in the old — a fact that will serve as well as any other to point a criticism which the new school buildings deserve — that they show no adequate degree of improvement over the old. The improvement is great, it is true, but it is due partly to the mere element of newness, and partly to the general advance in architecture — not to that careful study of school hygiene in general and the school problem here in Buffalo in particular, which we had a right to expect. It is the simpler and more obvious elements alone which have been mastered. On the other hand, the lack of improvement in school furniture; the space devoted to unsanitary cloak-rooms; the maladjustment of light; the lavatory with a line of unscreened seats; the restricted school lot, showing such lack of foresight,— all are to be found in connection with the new buildings, while the system of ventilation which does not ventilate is distributed with equal hand to old and new alike.

We believe that the lack of effective care and responsibility which these facts indicate is one of the most crying evils of our present school system.

THE ANNEXES.

The annexes fall into three distinct classes: (1) those known as the old buildings, (2) the frame buildings owned by the city, and (3) the rented annexes. Of the 25 now occupied, the city owns 14. Of these 14, three, belonging respectively to Schools Nos. 18, 24 and 32, are old school buildings, built, all of them, before 1860. The one belonging to School 18 dates as far back as 1848. These are brick buildings, with an assembly room on each floor, and smaller recitation rooms at the rear. Two have no cellar, but simply a ventilated air-space underneath, and the third has a low basement used for coal.

All three of these buildings depend for heat upon stoves alone.

Two depend entirely upon window ventilation. At the third, No. 32, there are ventilating shafts, but as the examiner reports that "the ventilating system was not visible, and the janitor did not understand it," it is a fair inference that the main depen-

dence for fresh air in this building also is on the open windows. At No. 24, the odor from the outhouse of the annex, which is but 14 feet away, often obliges the windows on that side of the building to be kept closed.

In each of these three annexes the children's wraps hang in the small halls adjoining the assembly rooms, and in all there are sinks either in these halls, or in the class-rooms, or in both. In the brick annex at No. 24 this small upper hall serves not only as passageway, cloak-room and wash-room, but it is also the place where many of the children congregate at recess to eat their lunch. On the second floor of this building are 130 children, six or seven years of age. They have one means of egress, an old wooden staircase, 3 feet 7 inches wide, and curving in one place. The building, it will be remembered, is heated by stoves. The extreme danger from fire is apparent. These conditions are practically reproduced in the brick annex at No. 18. The one at No. 32 has a safeguard in an additional staircase in a brick tower at the rear of the building, but as the steps of this stairway are of wood, it must be regarded as a fire-escape *de jure* rather than *de facto.*

Defective as these buildings are, they are, with one exception, by far the best of the annexes. That exception is one of the second class (frame buildings owned by the city), and is the two-story wooden building in the rear of No. 9. The others of this group are those known popularly as the "pasteboard" annexes, and belong to Schools Nos. 3, 4, 18, 19, 24, 31, 33, 41, 42, 43 and 44 — 11 in all. They resemble each other closely, and for the sake of definiteness, the one at No. 18 will be taken as an example of the class. It is a one-story frame building of the lightest possible construction, with four rooms opening into a central hall. The building rests directly on the ground, and after a heavy rain the flooring is often wet by absorption from the earth beneath. Owing to the thinness of the walls it is very hard to heat, and in winter the temperature is often not more than 51 degrees. This is in spite of a system of hot water heating which has recently replaced the stoves. Ventilation is by windows and by a round opening in the ceiling of each room so imperfectly capped that the rain sometimes drips in on the pupils below. The air space per child in these rooms averages but 126 cubic feet, instead of the minimum requirement of 250. In every room there are more children than desks, and in one room some

children must occupy desks so much too large for them that they cannot touch their feet to the floor. The walls of this building are covered with a torn and shabby paper. The light in two of the rooms is insufficient on cloudy days, but there is no provision for artificial lighting. The four class-rooms, with their 190 children, open into the central hall. This hall, which is partially lighted and not at all ventilated by one small window, contains a sink and the children's wraps. With the outer door closed, as of course it must be during most of the school year, the hall is so dark that the wraps hanging on the walls are an indistinguishable mass. This annex is 16 feet from the two-story brick annex which overshadows it, and the same distance from the outhouse — often in bad condition — which is used by the 350 or more children in these two buildings. This poisonous hovel was built for a school-house, by the city, against the protest of the principal of No. 18, and has been occupied by women and little children for ten years.

The pasteboard annexes built more recently are superior to this one, in having an air space underneath, but otherwise the conditions at No. 18 are reproduced without substantial variation. The one at No. 18 is fortunate in having other heating apparatus than the stoves ordinarily used. The corresponding annex at No. 24, even at the close of a ten days' vacation, was acrid with the lingering odor of coal gas. This last annex is but nine and one-half feet from a two-story brick annex, and, in consequence, one room is very dark. The four school rooms here, too, open into a central hall. It is 32½ feet long by 6 feet 10 inches wide; has one window 6½ by 2½ feet; it contains the wraps of 140 children and a sink, and here many of the children spend their recess and eat their lunch. At No. 19 the pasteboard annex is about four feet from the three-story main building, and one room is so dark that the children are sometimes obliged to stop work. There is no provision for artificial lighting. The cubic air space per child in this building ranges from 85 to 89 feet, with no ventilation, and with coal stoves. It is not necessary to multiply this detail; unfortunately, the type is constant.

The annexes of the third class — the rented buildings — offer more superficial variety, but in essentials they are very much alike, and in no case are they adapted to the use to which they are put. The "Swift Building," at Utica and Masten streets, a rented annex of School No. 8, is at least a fair example, since it

is materially better than many others. Four rooms are here used as school rooms. They are unventilated except by windows and transoms, opened directly over the children. They are heated by stoves, well supplied with coal gas, overcrowded with children, and three of the rooms are within a few feet of an outhouse which gives out a bad odor. In two of the class-rooms the children's wraps hang on the walls. These are not hurried and temporary arrangements, for this building has been occupied for school purposes for nine years. The yearly rental is $840. The points of superiority of this annex over many other of the rented buildings is that it is less shabby than they, that it has a cellar, and that, as the children are all on the ground floor, there is no danger from fire. That danger, in some of the rented annexes, is very great, as will be found on reference to the section of this report treating of that topic. The report on the rented annex of School 24, known as the "Schutz Building," at the corner of Utica Street and Fillmore Avenue, is also especially commended to your attention, as presenting an admirable example of all that a school building should not be. The annexes rented this year belong with Schools Nos. 7, 8, 9, 15, 19, 24, 43, 51 and 52, eleven in all, as No. 19 has two. Of these annexes one has been occupied nine years; one, six years; four, three years; one, one year, and four additional ones were rented this fall. It would be unfair not to mention again the effort which has been made of late to do away with the rented annexes, but it must also be said that their number is not yet reduced to what may be called the normal limit, that is, the number necessary to meet temporary and unforeseen needs. Last year the examiners of one rented building found eighteen children huddled for recitation in a room 13½ x 9½ feet. The room had one window, 5 x 2 feet 4 inches, contained a stove and a sink and was hung with wraps. It opened into another cloak-room, was within two and one-half feet of a neglected stable and within 10 feet of the outhouse belonging to the annex. The room was so crowded that children were in contact with the window and the fender of the stove. The condition of this room on a winter day, with wet wraps on the wall and the stove doing its best, may be imagined. A hall in another rented annex, with a floor space of 10 x 23 feet, and 12 feet in height, was used both as cloak-room and recitation room also. At one end there was a door, at the other a window, both closed, and in this space were a large stove, a sink,

a water-closet, the wraps of 100 children, and frequently a teacher and 38 pupils. This hall was between the two grade rooms. At still another rented annex, which reproduced in full measure all the vicious features of its class, the front wall of a filthy outhouse was just eight inches from the window of one class-room, and directly under that of another, both of these schoolrooms being entirely dependent on windows for ventilation. These three annexes have this year all been given up. But of what avail is it to have them wiped out on Best Street only to reappear on Forest Avenue? A rented annex for School 52 is now being made ready on this latter street, which is being provided with such defects as are not inherent in the construction of the building. The house rented is new, and has cellar and furnace — points of superiority, all of them. But the wraps of 60 children are to hang in their class-room behind a partition extending three-fourths of the distance to the ceiling, the ventilation which was intended to serve the needs of five or six persons will have to supply those of sixty, and a lavatory is being constructed within a few feet of the rear window of the main school-room. This lavatory has separate entrances for the boys and girls, but in order that one stove may serve for the entire closet, the partition between the two sections is wood for but three-quarters of the height, with wire netting above.

It is hoped that the "Schutz Building" and the "pasteboard" annex of No. 18, taken as types of their respective classes, will soon be closed, but experience shows that this is a hope with a large element of uncertainty. For instance, last year School No. 24 had six annexes, No. 9 had two, and No. 55, one. All of these schools had also children in basement rooms. This fall two new schools, Nos. 57 and 58, were opened, which, it had been predicted, would relieve the pressure on these older schools —"close all the annexes." But the new schools, opened in September, are full. No. 58, with a seating capacity of 850, has 958 registered, and No. 24 has still three annexes, No. 9 has still its two, both crowded, with an additional line of desks in most of the rooms in the school building proper, while both of these schools, and No. 55 also, have still classes in their basement rooms. It would seem that the humane housing of our school population is not yet accomplished.

Before leaving the annexes, a summary of the financial policy which they represent may be of interest. Following is a table

of the rented annexes, with rentals paid and the length of time each building has been occupied. No. 12 is this year occupying a rented building, but as it was rented only this fall and is to be given up when the new school building, now in process of erection, is finished, it must be considered a perfectly legitimate arrangement and should not be classed with the annexes. The Kensington School, however, is included in the subjoined list, as it has been occupied for three years, and there is no immediate intention of closing it.

RENTED SCHOOL BUILDINGS, 1897–98.

Belonging to School	Location.	No. of Years Occupied.	Rent.
No. 7, . .	Clinton and Weiss, . . .	Since Oct. 1, '97,	$180.00
No. 8, . .	Utica and Masten, . . .	" Sept. '88,	840.00
No. 9, . .	227 Doat Street, ...	" Oct. 12, '96,	480.00
No. 15, . .	50 Mulberry Street, . . .	" Sept. 1, '91,	240.00
No. 19, . .	Dewitt St. and Helen Place,	" Jan. 1, '94,	240.00
No. 19, . .	Herkimer and Delavan, .	" Oct. 21, '96,	300.00
No. 24, . .	Utica and Fillmore Avenue,	" May 8, '94,	1,200.00
No. 43, . .	Lovejoy and Ideal, . . .	" Nov. 1, '97,	360.00
No. 51 . .	Ontario and Mayer, . . .	" Oct. 1, '94,	216.00
No. 52, . .	240 Forest Avenue, . . .	" Oct. 1, '97,	600.00
Kensington School, .	Richlawn and Shawnee Avenues, ...	" Oct. 17, '94,	250.00
		Total rental, .	$4,906.00

The registration in these buildings is 1,220. Compare this with the cost of sheltering children in city buildings. No. 58, for instance, which has a seating capacity of 850, has cost, according to the report of the Superintendent of Buildings, $49,058. This includes the cost of the land. Assuming that the city borrowed this entire amount at three and one half per cent.— the rate of interest on the outstanding school bonds — the yearly interest charge would be $1,716.94, an annual cost per capita for the 850 pupils of $2.02. On the other hand, the 1,220 pupils housed at a rental of $4,906, cost per capita $4.02. Or in other words, while it costs the city $1,716.94 annually to lodge 850 children in a new city school-house, it costs $3,417 to lodge the same number in rented buildings. This leaves out of account

the immense superiority of the city buildings, and it should be remembered that the city must spend also two or three hundred dollars in order to turn even an easily adaptable house into school rooms, and, at the end of such occupancy, the building is restored, at city expense, to the condition in which it was received from the owner. Moreover, years of waiting usually mean that a higher price must be paid for the land when it is at length decided to build. We realize that the increase in the school population does not always so place itself as to be easily provided for as it should be, but the figures seem to indicate that there are financial as well as humanitarian reasons for avoiding the rented annex.

Our duty in regard to the pasteboard annexes is also clear. They are a type of building whose use should be tolerated only as a temporary makeshift under special stress of circumstances. But we find, on the contrary, that two of these buildings are entering on their tenth year of service, and one on its ninth, and that two of these three are to remain in use for an indefinite time to come. Three annexes of this class were erected in 1895 and two in 1897. About 2,000 children are housed in such buildings.

In the final analysis the responsibility for this rests upon the community, which tacitly sanctions their use, but whatever public spirit or public conscience there is among our citizens should come to the aid of those school officials who are laboring for their removal.

SANITARIES.

The general condition of the sanitaries varies greatly; twenty-eight are pronounced good; seven, bad; one, foul; seven, fair; seven have bad odors; four, imperfect flushing; five, no ventilating shafts (or practically none, for they do not work); two are imperfectly ventilated; one is good, but not large enough for the school; one, on third floor, has insufficient flushing; one does not expose plumbing; three have other defects; one has its cement floor sloping in the wrong direction. Aside from such matters, a fact that has especially surprised your Committee is, that there are no partitions between the seats in quite a number of the closets (about 21). There is merely a large room with a row of seats exposed to full view. This is true of the closets for girls as well as of those for boys, and is to be found in new

school buildings as well as in old ones. We believe that it is one of the special duties of the schools to foster modesty and refinement, but this arrangement militates directly against that end. Professor Baldwin and Dr. A. P. Marble — two of the best authorities on school buildings — unqualifiedly declare that "enclosed retiring compartments are essential in all properly constructed school buildings." The New York State Board of Charities as far back as 1892 severely criticized the management of the largest and most modern reformatory for boys in this State because it found the building fitted with doorless closets. (See page 342 Official Report, 1893, Hon. Wm. P. Letchworth.) The closets in our schools above referred to not only lack the doors, but they lack even the partitions between the seats to which the doors would hang. In view of all these facts, recommendations in regard to the sanitaries are scarcely necessary, for it is apparent that some important changes should be made in their construction, and that they should be inspected with much greater care.

TOWELS.

There is no rule as to the use of towels in the schools. Many schools allow none whatever for the children; others have the habit of furnishing a few: for example, one school has one towel every two days for 110 children; another, one a week for 200 children; another, two a week for 138 children. The very great danger from infectious diseases in such cases is evident. In consequence of this danger, and also because the danger cannot be avoided without providing a very large number of towels for each school, your Committee recommends that towels for general use be abolished. In case of emergency they should always be available; hence, a few should be in the possession of each school.

HEATING.

The quantity of heat that can be furnished by the heating apparatus of the public schools is on the whole sufficient; but serious complaint is to be made as to the way in which it is distributed throughout the rooms and as to the regularity with which it is furnished. The system largely used is steam,— either direct or indirect radiation, or both combined.

Four schools are heated by hot-air furnaces, which, excepting that in No. 42, are reported as satisfactory. In No. 42 there is no provision for evaporation of water, and the air is unhygienically dry.

Seven schools, and eight of the frame annexes owned by the city, and almost all of the 11 schools rented by the city, are heated by stoves. In a majority of these there is complaint of coal gas, the cause being improper care of the stoves, their poor condition, or the fact that the draught of the chimney is imperfect. Whatever be the cause, it is undoubtedly a fact that stoves do give out more or less coal gas, no matter what be their kind, state or care; and that they are contributing causes to the unhealthy condition of the school rooms.

Strange to say, in rooms heated by steam or by hot air furnaces, responsibility for the proper amount of heat is not fully placed upon any one person. When the temperature is regulated by the janitor, he very often depends upon his personal feelings rather than upon frequent and careful consultation of the thermometer; among the teachers there is no clear understanding as to the temperature ordinarily desirable in a school-room, the temperature that they state in the reports varying from 68° to 78°. It is evident that under these circumstances extremes of temperature are likely to be frequent.

In rooms heated by stoves the temperature is ordinarily regulated by the teacher in charge; and it often happens that, consciously or unconsciously, she is governed by her own individual comfort in regulating the heat, instead of consulting the thermometer. If she happens to be warmly clad, or to have her desk near the stove, the room is apt to be too cold, while the reverse of these conditions usually results in its being too warm.

It is difficult to heat a large room uniformly with stoves; parts of such rooms are usually too warm, while other parts are too cold. To be sure, shields around the stoves do protect those near them from the excessive heat to a considerable extent, and form a necessary accompaniment where that method of heating is used.

The heating of the so-called pasteboard annexes cannot be too strongly criticised. To counterbalance the very free and dangerous draughts which rush in from the windows, under doors, through the floors, and even through the walls, in some annexes, a large amount of heat is necessary, and is furnished by

stoves, which must be kept too hot, or by numerous rows of iron pipes heated to their fullest capacity. The result is that the temperature in the room is uneven, and that children sit in hot places and are fanned by cold draughts,— conditions which are enough to depress even the strongest.

Your Committee regards the following recommendations as urgent:

1. Seats should be placed at least three feet from radiators or steam pipes.

2. The janitor alone should be held responsible for the temperature in each room; he should consult the thermometers at least every two hours, and should regulate the temperature of the room in accordance with them.

3. The use of stoves should be abolished as rapidly as possible; but where they must necessarily be used, they should always be surrounded by proper shields.

4. Each boiler should be inspected at least once a year by a regular inspector, and a signed and dated certificate of inspection, showing its condition to be satisfactory, should be posted in a conspicuous place in the boiler room.

At present these requirements are but infrequently met with in the schools.

VENTILATION.

The data relating to ventilation, comprise reports on the character and degrees of efficiency of the various systems in use, the number, size and position of the heating and ventilating flues, and of their inlets and outlets, and the amount of air space per pupil.

In the determination of efficiency of apparatus and thoroughness of ventilation, there has been no resort to chemical or other exact technical examinations. The opinions arrived at are based upon the more general testimony of the senses as to the condition of the air of the several rooms at the time of inspection, and upon an investigation into the working of the mechanical and other devices relied upon for ventilation. The statements of teachers, as to the general condition of the air, have also been given due consideration.

According to the reports, the mechanical or fan systems are found in 32 school buildings. Of these only 11 are reported as operating satisfactorily; nine as fairly so; eight as being unsatisfactory. Regarding two, no reports have been received. The remaining two, located in buildings but just completed, had not been tested at the time of examination.

The rarefaction system is found in 19 schools. Of these but six are said to be working satisfactorily; four fairly so; and seven unsatisfactorily; two not reported on.

Five schools are recorded as having the natural system. Of these, three are considered fairly satisfactory; two unsatisfactory.

Seventeen schools are found with no system of ventilation. Several schools have combinations of systems. In a number of buildings the ventilating apparatus was found to be out of order and not running.

In the preceding review many of the annexes are reckoned as separate school buildings.

It will thus be seen that out of 56 ventilating apparatuses, only 20 are working satisfactorily, and 36 are defective.

The Committee accepted 250 cubic feet of air per pupil as the minimum limit. This standard is well within that recognized as necessary, even with good ventilation. It is also within the limit fixed by law in many countries. Compared with this standard, 24 school buildings are found to have every room deficient; and, of the remaining schools, including annexes, 324 rooms are also reported as lacking in air space. These figures would be still larger if all the schools had been fully reported on. Of only one school is it said that every room is sufficient; of one other that "none of the rooms would be markedly deficient if the ventilation were somewhat improved." In the annexes, with scarcely an exception, the ventilation is bad.

In passing judgment upon these facts, several considerations must be borne in mind. Many of the rooms, although below the standard, are but slightly so. This is especially true of the newer buildings. The minimum standard adopted, while undoubtedly a reasonable one, is yet arbitrary. Such a standard must always be considered as inversely related to the efficiency and adequacy of the ventilation. It is claimed for one or two schools that the air can be entirely changed every 15 minutes. It is evident that under these circumstances much less air space is demanded than in schools with poorer or practically no venti-

lation. Still, in many schools the air space is altogether too far below any reasonable limit, in many rooms being less than 100, and in some less than 70 cubic feet per pupil. To make matters worse, these serious defects are usually found in schools with the poorest ventilation. In many schools, where windows are relied upon for ventilation, complaints are made of exposures to draughts.

The Committee recognizes the fact that the subject of ventilation is both complex and difficult, and that there still exists some disagreement, even among experts, as to what constitutes the best system. The mechanical plenum system seems to be the one more generally recognized as, on the whole, the best, especially in the two important considerations of being comparatively independent of the outside temperature, and in giving control over the source of the incoming air.

For the purposes both of heating and ventilation, this system is frequently and advantageously combined with that of rarefaction. A large number of inlets and outlets is recommended as lessening the force of draughts, and as promoting more uniform diffusion.

The committee also regards this subject of ventilation as one of vital importance. The continued breathing of air laden with impurities, gaseous, organic and bacterial, is the cause of many diseases; and, what is at least equally important, is still more frequently the cause of lowered vitality, predisposing to more definite diseases. Headache, lethargy, mental dullness, various nervous disturbances, impoverished blood, and many other ailments are common results.

Consequently, we recommend that an expert be engaged to make a series of examinations, chemical and microscopical, of the air of class-rooms. In this connection, attention is called to a very interesting and valuable series of experiments, made in 1893, by Dr. Herbert M. Hill, at the suggestion of Health Commissioner Wende. In the report, which is on record at the Health Department, a detailed comparison is made between the condition of the air in some of the Buffalo school-rooms and that in certain of the schools of Rochester. These and similar investigations should be continued, for the whole matter is worthy of the most careful investigation by an expert.

The Committee also suggests the regular use by teachers of some of the simpler tests, such as those with lime and baryta, for determining approximately the degree of air contamination.

The general principles of ventilation, as well as the mechanism of the special system in use, should be explained to the teachers. In cases where, for the time being, ventilation must be obtained by means of windows, various well-known appliances for preventing draughts should be arranged. Assuming the observance of ordinary precautions, the rooms can with impunity be thoroughly ventilated, from time to time, by means of widely opened windows, the pupils being meanwhile engaged in calisthenic exercises.

It is clear that the ventilation of the public schools needs a sweeping and thorough investigation and correction. It does not seem unreasonable to demand that the mass of elaborate and costly apparatus, with which our schools have been provided, be made to do the work for which it was designed. According to a report furnished by the Superintendent of Public Buildings, the fan system of heating and ventilating is found in 33 schools, including the two high schools. The total cost for the 33 schools is $241,303.64, an average of considerably over $7,000 for each school. And yet we find that in nine of these schools the ventilation is decidedly imperfect, and in eight others positively bad. These facts speak for themselves and require no comment.

Certainly, no more money should be spent either in installing or remodeling systems that will not work.

Following is a statement showing the public schools having the fan system of heating and ventilating, with the cost of installation, and a summary of the report made by examiners on each:

School No.	Reports of Examiners.	Cost.
1, ...	New apparatus, not yet fully tested, . . .	$9,990.00
7, ...	Not entirely satisfactory. Open windows necessary, ...	4,371.00
10, ...	"The ventilation is farcical,"	
11, ...	System reported as perfect, but janitor "has no time to attend to ventilating apparatus," and principal prefers old-fashioned natural ventilation, ...	7,800.00
12, ...	New apparatus, not yet tested, ...	6,927.00
17 (addition),	"Insufficient and practically useless," . .	3,596.00
18 (new build'g),	New apparatus, not fully tested, ...	6,317.00
23, ...	"Utterly fails to provide fresh air for pupils,"	8,237.00
26, ...	Ventilation poor. Apparatus good, but little used, ...	7,541.00
27, ...	Said to work well, ...	7,078.00

School No.	Reports of Examiners.	Cost.
33, ...	Apparatus defective, ...	$9,500.00
34, ...	System of ventilation wrongly constructed,	8,393.00
37, ...	Not yet in full running order. Plan for ventilating boys' closet defective, . . .	7,077.62
38, ...	"System is simply laughable,"	3,441.00
39, ...	Supplementary window ventilation in seven rooms, ...	4,770.43
44, ...	All rooms but one well ventilated, . . .	7,572.00
45, ...	Said to work well. Outlets for foul air in rooms found closed, ...	8,938.00
46, ...	Not satisfactory. Dependence on windows constant, ...	5,644.00
47, ...	Said to work well, ...	6,500.00
48, ...	Window ventilation used a great deal. One outlet in each room kept closed, . . .	7,280.00
49, ...	Practically no ventilation except by windows,	7,000.00
50, ...	Works well, ...	5,861.64
51, ...	New apparatus, which does not work, . .	5,012.05
52, ...	"Well ventilated,"	5,601.40
53, ...	System works well, ...	7,158.00
54, ...	Apparatus has never worked well, . . .	5,932.64
55, ...	Seems insufficient; windows open in every room, ...	5,166.25
56, ...	Apparatus defective; works badly, . . .	7,795.16
57, ...	Shaft for closets does not work well, . . .	8,757.00
58, ...	New apparatus, not tested at time of inspection, ...	8,757.00
59, ...	School not finished when these examinations were made, ...	10,278.00
60, ...	School not finished when these examinations were made, ...	7,527.00
Central High,	Entirely inadequate, ...	7,991.00
Masten Park High School,	Works well on the whole, ...	17,493.45
	Total, ...	$241,303.64

LIGHT.

The average area of square feet of window space compared with the average area of square feet of floor space shows that theoretically there is, as a general average, an abundance of light in our schools. This window area to floor area stands in the

ratio of about one to three, which is greater than the standard generally accepted, that of one to five or six.

But, even with this large average area for light, there are reported five (5) rooms in which the light is insufficient even on bright days, and over one hundred (100) in which the light is insufficient on cloudy days. In forty (40) of this latter number, artificial light is used on cloudy days from a few minutes to all day, depending upon the season of the year and the weather.

In quite a number of rooms the light falls on the desks from the wrong direction, that is from the right side.

In at least thirty-five (35) rooms the children face the light to a greater or less extent.

On the south side of at least three (3) buildings the light is objectionably bright and becomes as serious a fault as the lack of light. Three (3) annexes are overshadowed by the adjoining main buildings and the light in one of these is so poor at times that work must be stopped.

In one school kerosene lamps are used in two (2) basement rooms.

Your Committee recommends that,

(*a*) All rooms in which natural light is usually deficient be abandoned, and all others which are liable to be dark at times be furnished with sufficient means for lighting.

(*b*) That the kerosene lamps in school No. 24 be removed and proper light furnished.

(*c*) That the school desks be arranged so that the light may come from the proper quarter. This applies, for example, to School No. 55.

(*d*) That shades — preferably of a neutral gray color — be provided for every window which the children must still face, and for all south windows which are exposed to the sun. These shades should roll from the bottom in order that the windows may be opened at the top and the light be properly subdued.

The need of such precaution is shown by the statistics regarding the eyesight of school children which have now been gathered in most of our leading cities. These show that about twenty per cent. of children suffer an impairment of vision during school life. The figures for Buffalo show that the average for nearsightedness rises from none among children of six, to 19 per cent. among those 13 years old, and to 26 per cent. among

those 18 years of age. Among the conditions which produce these percentages, defective or wrongly-placed light is not the least. This fact is not fully realized, since we find that the desks in one school-room [No. 40] were placed facing the light, because they "looked better" so. In four rooms at No. 55, also, the children face the light, and though this arrangement has been reported by the principal of the school and the Board of Examiners, it remains unchanged.

DANGER FROM FIRE.

A grave responsibility rests upon the city of protecting the children at school against serious danger from fire. There is comparatively little risk from this source for those children who are confined to the first and second floors of the large school-buildings. The danger arises in connection with the third floor of three-story buildings, and in the annexes. Out of the 61 large school buildings in the city, 30, or about half, have school-rooms upon the third floor, and at present, approximately, 5,590 children occupy them daily. Three of these buildings, i. e., Nos. 6, 12 and 31, were found so extremely dangerous last spring that your Committee anticipated the present report by a detailed consideration of them before the Association at its May meeting. In consequence of this action, the authorities ordered fire escapes to be placed in schools Nos. 6 and 31. School No. 12 has been torn down. While these were, beyond doubt, the most dangerous school buildings in the city, there are many others in which better protection against fire is urgent. Some of the three-story buildings are not in need of fire escapes, for they have broad, well-lighted halls, and two or more stairways placed at a considerable distance from each other. This is true of the newer buildings. But many of the older ones have halls that are narrow and dark, and stairways that are narrow, dark, steep and hung with wraps. Also, they are, in some instances, so constructed that fire at one point could render them practically useless. In such cases an appalling loss of life might result. It is the opinion of your Committee that many fire escapes are still needed in the three-story buildings in order to render them reasonably safe. Care should be taken, too, to provide suitable ones for the purpose. The ordinary fire escape, such as is used on business buildings, is entirely unsuitable for schools. The latter

require carefully-constructed covered stairs. The cover is especially important, since, without it, the stairs are likely to be covered with ice and snow at the season when danger from fire is greatest.

The danger from fire in some of the annexes is extreme. For example, as is stated in the section of this report on annexes, there are, at the brick annex of school No. 24, 130 children, only six or seven years of age, who have but one exit from the second floor, and that is an old wooden staircase, three feet seven inches wide, with a curve at one point. The building, too, is heated by stoves. Since the rented annexes are frame buildings, not built for school purposes, and have narrow halls and steep stairways, and since they are at the same time crowded with children, and in most cases heated by stoves, the danger from fire is apparent in them also.

The rented annex of school No. 9, at 227 Doat Street, is a case in point. It is a two-story frame building, with steep staircases, and is heated by stoves, and crowded with children of primary and kindergarten grades. The accompanying diagram shows very clearly what a firetrap the building is. Its use as a place in which little children are congregated daily should be discontinued without delay.

Another case, equally flagrant, is described in the detailed report on school No. 18, where a diagram is also shown.

It is also the opinion of your Committee that in order to eliminate still further the danger from fire, there should be a more regular practice of fire drill in all of the schools. There is no regular practice in regard to that matter at present. Some principals report such practice as taking place twice a day, but others as coming but once a year. Such drill should be given at least as often as once a month, if it is to have influence in preserving order and securing a speedy exit from the building at a time when minds are excited by the cry of fire.

CLEANING.

The cleaning of the schools is regulated by city ordinance, and is in the care of janitors, who are appointed by the Mayor. As is natural, these janitors put varying interpretations on the requirements of the ordinance governing their work, with

the natural result that some schools are kept much cleaner than others. In the main, our examiners have given favorable reports of the cleanliness of the school buildings, but four schools being reported as either in whole or in part "dirty" or "foul." They have not, however, been unobservant of many conditions which more care and diligence on the part of certain janitors would have improved greatly. This Committee has but one contention on this subject, and that is that the schools shall be kept scrupulously clean from attic to basement, both inside and out. With this end in view, they would criticise seemingly unintelligent janitors for dusting immediately after sweeping, or even an hour after, — as many janitors have reported their custom to be, — this being done, by their own confession, with feather dusters. The abolition of the feather duster is recommended.

With regard to the use of disinfectants, we maintain that cleanliness, good plumbing and good ventilation are more wholesome than disinfectants, in cases where the use of disinfectants merely means making one odor cover up another odor.

Such minor recommendations are, however, of small value as compared with the more radical one which we feel it of importance to make. Under the present system of appointing janitors, there results a division of authority in the school which renders it many times practically impossible to remove incompetent janitors. We believe that the principal should be responsible for the cleanliness of the school. To secure this, an examination on school sanitation should be included in a principal's examination, and the janitor should be appointed according to some system which would make it possible for him to be directly accountable to the principal and under his control. It is believed that by thus making the principal responsible for the final results, a much higher average of cleanliness would be achieved than under the present method of appointment and divided responsibility.

CONCLUSIONS.

In conclusion, the most pressing sanitary needs of the schools, as shown in the foregoing report, may be summarized as follows:

1. School lots should be purchased of such a size as to protect the school against the loss of light, air and sunshine, and

against the close proximity of neighbors detrimental to its value as school property. In this way, playgrounds would be furnished also. This provision has been neglected in connection with even the most recently built schools, erected in sections of the city where land is cheap.

2. Such appropriations for school buildings should be made as shall speedily abolish the annexes, relieve the overcrowding in the schools and allow the normal amount of air space for each pupil. Twenty-five annexes are now in use; in fully one half of the buildings rooms that were not intended for school use are so occupied, and in at least 17 buildings there are pupils without desks. Also, the air space per pupil is insufficient in a great majority of rooms in even the newer buildings.

3. Some arrangement which shall be hygienic and economical of space should be substituted for the present methods of disposing of the children's wraps.

4. Adjustable seats or their equivalent should be provided at once in every school. The lack of them inflicts, daily, wanton injury on helpless children.

5. The plumbing of the schools should be put in sanitary condition and a systematic and adequate inspection of such plumbing should be provided. A signed and dated certificate of such inspection should hang in the janitor's room.

6. Such changes should be made in the children's lavatories as shall insure proper privacy there. Fifteen schools have no partitions between the seats in the lavatories. This is not the case in the older schools alone, but in such recent ones as Nos. 39, 1, 48 and 49. Also, some of the recently constructed closets have floors of wood.

7. Towels should not be furnished for general use.

8. Furnace boilers in the schools should be inspected at least once a year, and the signed and dated report, giving result of such inspection, should hang in the janitor's room.

9. There should be a thorough examination, as soon as possible, by experts, of the air of the class-rooms.

10. Further investigations of methods of school ventilation should be made and the efficiency of the ventilating apparatus now used in our schools be tested by experts. Heating and ventilating apparatus has been placed in 56 schools, at a probable cost of much more than $300,000. It secures good ventilation

in not more than 20 of these schools, and in many of them it accomplishes practically nothing in this direction.

11. School rooms which are deficient in natural light on bright days should be abandoned, and a sufficient supply of artificial light should be furnished those liable to be dark at times.

12. Desks should be so arranged that the light comes from the proper quarter, and shades should be furnished those rooms in which the light is too strong.

13. Fire drill should be practiced regularly and frequently in the schools, and those buildings where the children are shown to be in danger from fire should be made safe for their occupancy.

Thirty of the school buildings of the city have school rooms on the third floor, yet a majority of these schools are without fire-escapes, and there is no established rule in regard to fire drill.

14. There should be a thermometer in every room; there should be a definite understanding as to what it should register; and some one person should bear the responsibility for the proper temperature throughout any one building.

The fact that so many recommendations, so vital in character, have to be made, shows that a large number of the public schools of Buffalo are a menace to the health of their pupils. Nevertheless, in accordance with the compulsory school law of the State, thousands of children are forced to attend them.

Your committee asks that the facts that it has here laid before you receive such attention as will lead to an adequate and permanent improvement in the sanitary condition of the schools.

Signed by the Visiting Committee.

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Miss MARIA LOVE, 184 Delaware Avenue.
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Mrs. HERMAN MYNTER, 566 Delaware Avenue.
Mrs. JOHN S. NOYES, 127 Linwood Avenue.
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REPORT ON INDIVIDUAL SCHOOLS AND ANNEXES.

CENTRAL HIGH SCHOOL, Niagara Square.

Building.—Fifteen of the twenty-three rooms fall below the standard in air space.

Ventilation.—Entirely inadequate. When the apparatus is run at full speed it is very noisy and even then it does not accomplish its purpose. Many outlets puff foul air into the rooms. The authorities are contemplating enlarging this apparatus, but in view of the amount which the city has already invested in ventilating apparatus which does not work, it would seem well to consider the matter very carefully before making any further expenditure. Cost of heating and ventilating apparatus in this school has been $7,991.

SCHOOL No. 1. Seventh Street, near Hudson.

This is a new building, just being completed.

Sanitaries.— But one closet, *i. e.*, for the larger girls, is furnished with doors before the seats.

Building.— Cloak rooms are provided as in other new buildings. No adjustable seats.

SCHOOL No. 2. On Terrace, near Genesee Street.

Site.— One block from Erie Canal, half a block from Central Railroad tracks, 70 feet from a saloon. Foundries, machine-shops and planing mills on both sides. A four-story tenement house is seven feet from the play-ground.

Building.— The walls are covered with a torn and shabby paper. A cloak-room is used for classes in addition to the regular class-rooms. One room, 8 x 10½ feet, is used for a class of 23 children. Another, 8½ x 14 feet, contains a class of 22, together with a teacher and stove. The children's wraps hang on hooks in the halls, in the storm-shed, and on the walls of the rooms. The basement is almost all below ground and unventilated.

Sanitaries.— The closets are in a one-story shanty. The traps are not ventilated. They are described as "a make-shift affair and a disgrace to Buffalo;" again, by another examiner, as "an unendurable shame to the city which tolerates them." In the girls' closet there are no partitions between the seats. The boys' closet, has, instead of seats, a railing over a long trough. Towels are provided for the use of the scholars. These towels are 18 inches by 30 in size and are used by about 20 children. They are changed three times a week, or oftener if the principal so orders. Quite recently little use has been made of towels.

Heating.—The building is heated by stoves. In very cold weather the building is not warm enough. One room is reported as heated by the stovepipe passing through it.

Ventilation.—Ventilation is simply by doors and windows. In one room on the first floor there is a window which cannot be closed at the top, and another in which a pane has been broken for two years. It was recently repaired. These have not been considered very serious defects as they assisted in ventilation.

Light.—The windows of one room are darkened by a brick building that is only a few feet away. Fully one-half of the 125 to 130 children who sit here have not sufficient light even on a bright day, and if the day is cloudy, gas is used throughout the entire session. In another room the light is insufficient on cloudy days and gas must be used all day. The attendance in this room is 116. In five rooms black-boards are in the walls with the windows.

Danger from Fire.—One hundred and five children are on the third floor of this building. There is no fire drill, but every day at 12 and 3 o'clock the children are dismissed by the outside stairs. These outside stairs — called "fire stairs" — are enclosed in a light board shell, which would probably be in flames speedily if a fire occurred in the building; which would, in fact, simply quicken the spread of the flames from the bottom to the top of the wretched old three-story building. This stairway runs from the ground to the third floor on one side of the house. It is but 3 feet 7 inches wide. It has but one landing, at the level of the second floor, from which a door opens into it. Even a panic, with no fire, might make a fearful death trap of it.

The main stairways in the front of the building are equally narrow, in a narrow hall way, with a big stove at the bottom.

Children's wraps are strung about in every available bit of room : in the hall, in the school-rooms, and even in the little entry to the girls' closet. Examiner adds: "I doubt if the children ought to be allowed to remain in the place another day — even to wait for the building of a new house. It is a child-trap of the most dangerous description, and may easily become at any moment the scene of some horrible holocaust."

The report states that in consequence of sanitary conditions and closet arrangements, this school is as much a seminary of bad health, ruined eyesight and indelicate habits as it is of reading, writing and arithmetic.

SCHOOL No. 3. Perry Street, near Illinois.

Site.— Completely surrounded by industries.

Building.— Every room is deficient in air space. In two rooms the air space is but 66 cubic feet per pupil, and no ventilation. The highest allowance in the building is in four assembly rooms where each child has 218 cubic feet, but no ventilation. The wraps in this building hang on the stair-landings and in the halls. The basement is not dry; found very wet at time of inspection, *i. e.*, January 24, 1898. Sewer is probably defective. Principal stated that there was one foot of water under whole building. Only entrance to this basement or cellar was through a trap-door, covered with rubbish.

Sanitaries. — The closets are in a separate building in the rear. Average number of pupils per seat is fifty. The examiner reports that cement floors are needed in the boys' closet. The floor is now of wood. No partitions between seats in girls' closet. Extra windows have had to be placed in the girls' closet for ventilation.

Heating.— The building is heated by stoves.

Ventilation.— None, except by windows.

Light. — The light is insufficient on cloudy days in two rooms. Black-boards are on the walls with windows in six rooms.

Desks.— Adjustable desks and seats are very badly needed.

This school has one annex. It is one of the paste-board annexes, but is described as better than the main building in its general condition. Ventilated only by windows. In the week of January 24, 1898, there were 72 pupils here without seats.

SCHOOL No. 4. Elk Street near Louisiana.

Site.—The school stands on low flat land and is surrounded by business houses. The play-grounds are very small. Building directly on street line.

Building.—Two extra rooms—in the attic—are used as class rooms. One room only comes up to the standard in air space. There the cubic air space per person is 264 feet. Three other rooms have an average of about 200 cubic feet. The lowest found in two rooms was respectively 90 and 91 cubic feet. The children's wraps hang on hooks in the halls, also in some class rooms.

Sanitaries.—No doors before the seats in the girls' closets. Neither doors nor partitions in boys' closets.

Ventilation.—Fairly good in the new part of the building, not so satisfactory in old. The attic rooms, opening on a narrow hall, have only window ventilation, and are consequently in very bad condition.

Light.—The light is insufficient on cloudy days in three rooms.

Fire.—Fire escapes are badly needed for attic rooms.

This school has one annex in the yard of the school building. It is a paste-board annex with floor almost directly on the ground. Window ventilation; also ventilators in roof.

SCHOOL No. 5. Seneca Street near Hydraulic.

Site.—No playground. Hydraulic Street, on which one side of the school-house fronts, and Carroll Street, which is but a short distance in the rear, are mud streets. During spring and fall they are practically impassable for persons on foot. It is almost impossible to prevent a crowd of 700 children getting into this mud, and the amount of dirt thus brought into the school-house is a very serious difficulty. A grist mill and a factory are near this school. The basement is used for a play-ground. It is too small for such a purpose, and is damp and more or less filled with sewer gas.

Building.—Constructed in 1891. It has two new rooms finished off as class rooms in the attic. Every room is deficient in air space.

Sanitaries.— Closets described as abominable. One is almost inside a grade room; two in the cloak rooms; the children's are in the basement. These basement closets are practically without ventilation, as the ventilating system "does not work." When the windows in these closets are opened, the closets ventilate into the basement rooms, up the stairways and into the building. There are no partitions between the seats in the closets.

Ventilation.—Reported as unsatisfactory and needing a thorough overhauling. Building is only seven years old and fan-system is the one in use.

Danger of Fire.—The halls and stairways are not fire-proof. No fire escapes. It will be remembered that there are children in this building in attic rooms. The stairway is narrow and these rooms are on third floor.

Remarks.—The following statement is made by Principal of this school: "The ground in rear of school house should be purchased. More room is needed now. This would give room for construction of suitable closets, and for the additional grade room now actually required, with the certainty that a few years will bring the necessity for at least another. The children are dismissed almost on Seneca Street with its trolley lines. These were not constructed when the building was erected. If this land were purchased, the entrance could be changed to Carroll Street — a change which would be hailed with delight by all the patrons of the school, many of whom have complained about the danger of children being dismissed from the present entrances. Also a play-ground would be provided by this purchase, which would take the children away from the surrounding streets, where their presence greatly annoys business men and residents."

Signed, J. McGEE,
Principal School 5.

SCHOOL No. 6. South Division Street, near Chestnut.

Building.—The two library rooms are used as additional class-rooms. With one exception, the rooms are deficient in air space.

Ventilation.—By windows only, as the air-shafts are useless; fan needed. Dressing-rooms in basement are foul and damp on account of lack of ventilation.

Light.—Shades are needed in the east and south rooms to temper the light.

Danger from Fire.—This building was reported last year as in great need of fire-escapes. They are now being put up.

SCHOOL No. 7. South Bailey Avenue, near Clinton Street.

Site.—At times there are pools of water in excavations of neighboring brick yards.

Ventilation.—Not entirely satisfactory. System has to be supplemented at times by opening windows.

This building has one rented annex. Opened this fall.

SCHOOL No. 8. Utica, corner Masten Street.

Building.—Over-crowded. Walls papered. Portions of halls used for class-rooms. In eight rooms more pupils than desks. Nineteen out of 20 rooms, built for class-rooms, are deficient in air space.

Sanitaries.—Roller-towels used, one for 110 children. Changed twice a week, or "when soiled."

Ventilation.—Ventilation system said to work well, but some rooms reported by examiner as "stuffy."

This building has one annex. It consists of four rooms in a rented building. These rooms are unventilated, heated by stoves, overcrowded, and within a few feet of the out-house of the annex. This out-house sometimes gives out a bad odor, and has floor and seats wet or frozen much of the time. Girls' and boys' closet not properly separated from each other. The children's wraps hang on the walls of two class-rooms. This annex has been occupied nine years.

SCHOOL No. 9. Bailey Avenue, near Doat Street.

Site.—Very small play-grounds, though when this school was built, land in this vicinity was abundant and cheap. Of the 12 rooms built for class-rooms, 10 are deficient in air space. Two basement rooms are used for classes. This year it has been necessary to place an additional line of 10 desks in most of the class-rooms.

This school has two annexes. The first is a frame building in the rear of the main building, which is, in general, in very good condition. But the ventilation is not so good as in

main building, and windows must be down from the top to give fresh air. Children are obliged to sit almost under these open windows.

THE DOAT-STREET ANNEX.

This is about as ill fitted for school purposes as could well be. It is a building such as is ordinarily occupied by a saloon or small grocery. The street door opens directly into the best school room, which is heated by a stove, is unequally lighted, and unattractive, in spite of the intelligent management which it has had. The cold storage closet now serves for the school supplies and the teacher's wraps.

A second school room on this floor consists of two small rooms used as one, though they communicate only by one small door. They have low ceilings, but one and two windows respectively, and accommodate 50 children. The number registered is 62. The rooms are heated by one large stove. Some children must be near it, others under the open windows. Some of the children must sit three in a double seat, and some of them must sit facing the light. In the one-window room, though, there is very little light to face. The teacher and principal do the best they can, by changing the children about in the room continually, so as to distribute the enjoyment of its disadvantages as equally as possible.

A third room, which is on the second floor of the building, consists of two parlors and two bedrooms thrown into one. It is heated by a stove, which gives off coal gas abundantly, and is ventilated by windows. Some children must be near these; some children must also sit facing the light, not more than four feet from the windows. The extra pupils are accommodated by putting three children in a double seat.

The fourth room is in appearance an attic room, with sloping roof, projecting beams and fragmentary partitions, so that the 50 children are stowed away in a series of cubby holes, as it were. It is heated by a stove and ventilated by windows. Children must be near both. They use a closet off this room for a cloak room.

The closets are dark and foul. The flushing does not work; the odor is unbearable.

The use of this building should certainly be discontinued. In addition to the defects already mentioned, it is a fire-trap. A

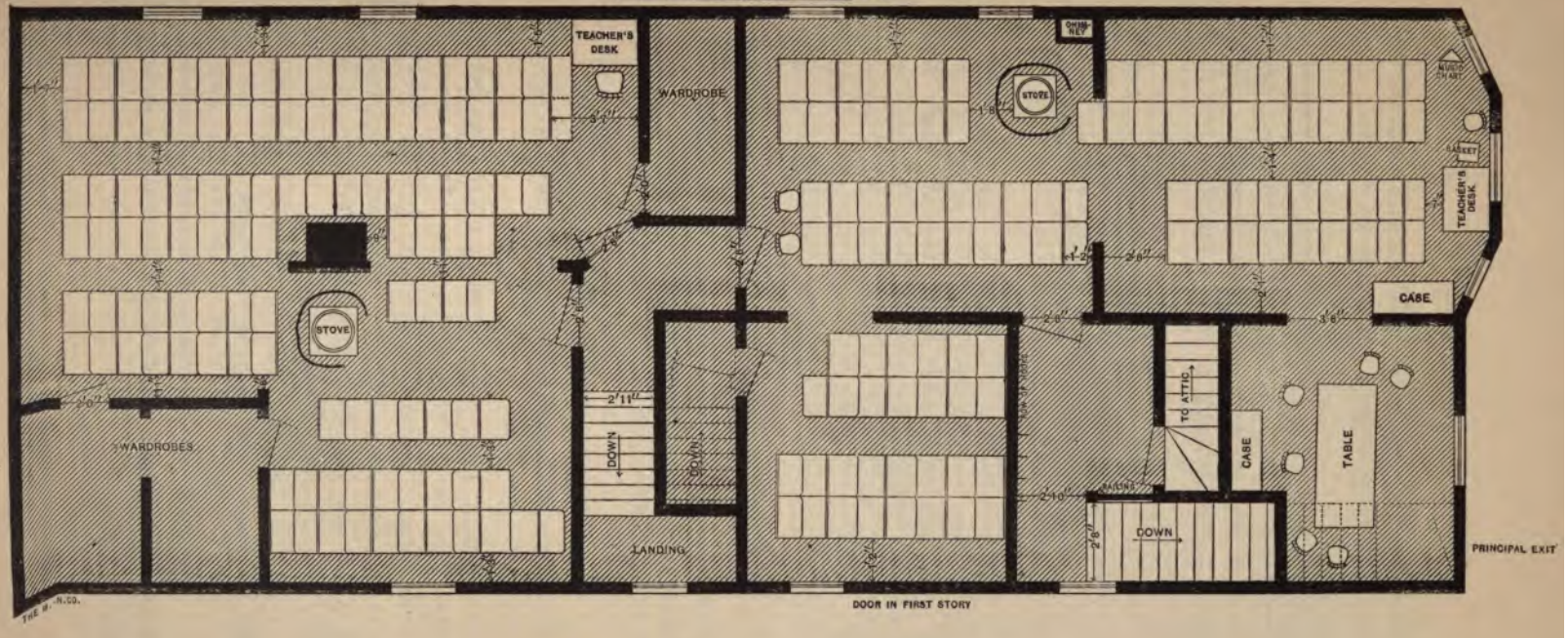
PUBLIC SCHOOL, No. 9.

PLAN OF SECOND STORY.

105 Pupils on this Floor.

SCALE: 8 FEET TO 1 INCH

0 1 2 3 4 5 6 7 8 9 10 FEET



detailed description of the building will be found in the section of the Committee's report on danger from fire.

SCHOOL No. 10. Delaware Avenue, near Mohawk Street.

Site.—Malt house in the rear is a nuisance, causing trouble by its dust and smoke as well as by its smell. No play-ground, although a limited space in rear of building, 18 x 104 feet, might be so used.

Building.—Walls of class-rooms papered. Every room deficient in air space. Basement gets no sun and is damp.

Sanitaries.—No doors to the closets. The floors are of wood, which should be changed without delay.

Heating.—Furnace draft is not good.

Ventilation.—Unsatisfactory. This is one of the newer buildings — constructed in 1885 — but the air shaft leads to attic instead of to the outside, and at times this heavily charged, impure air sets back into the school-rooms. Some cloak-rooms have no artificial ventilation. The only way in which the impure air escapes from the attic is through windows, but these have to be closed if the wind is blowing from the east or south. The size of this attic, into which the air shaft opens, has recently been diminished by more than one-half by the construction of an assembly room in it for the use of the City Training School. The ventilation is farcical; the fan system is the one in use.

SCHOOL No. 11. Elm Street, near Eagle.

Building.—Two rooms only are deficient in air space. Play-ground is not drained.

Sanitaries.—There were formerly no screens between seats in closets; they have been recently placed there, however.

Ventilation.—System reported as perfect; but janitor says that he has no time to attend to ventilating apparatus, and principal states that he prefers the old fashioned natural ventilation. The cost of the system was $7,800.

Light.—Insufficient on cloudy days in one room. Many other rooms need shades to moderate the light.

SCHOOL No. 12. Spruce Street, near Broadway.

The old building has been torn down and a new one is in process of erection.

SCHOOL No. 13. Oak Street, near Genesee.

Building.—With one exception every room is deficient in air space. Five of the class-rooms are reported by the examiner as not suitable for that purpose. The children's wraps hang in the halls, which are poorly ventilated. The basement is poorly lighted and ventilated.

Ventilation.—Inadequate, even if the apparatus is driven to the fullest extent, when it is noisy. It is impossible to keep the air pure, especially in smaller rooms.

Light.—Is insufficient on bright days in three rooms. On cloudy days in five rooms.

SCHOOL No. 14. Franklin Street, near Edward.

Building.—A tower room on third floor is used for a German recitation room. It is reached by a winding flight of narrow wooden stairs going up from the principal's office. It has no other approach, and no other egress except a ladder to the roof. All of the rooms in this building are deficient in air space. The walls are papered.

Ventilation.—Unsatisfactory, feeble. The teachers rely upon windows for ventilation.

Light.—Is insufficient on cloudy days in one or two rooms. Black-boards are in the walls with windows in nine rooms. Some of these black-boards are not much used, others are.

Danger from Fire.—The stairways and halls are fairly broad, but the latter are encumbered by bookcases and tables.

SCHOOL No. 15. Oak Street, corner Burton.

Site.—Oak Street is cleaned twice a week. The other two neighboring streets a few times a year.

Building.—The end of one hall is used for a class-room. All rooms are deficient in air space. The best has 242 cubic feet and the average is 174 cubic feet. Class-rooms papered.

Sanitaries.—The sanitaries are foul and offensive, but the janitor cannot prevent it, as the fixtures are not good. There is very little ventilation.

Ventilation.—Teachers try to keep the air fresh by window ventilation.

Light.— Insufficient on bright days in one room. On cloudy days in five rooms. Light is too bright in two rooms. Blackboards are on the walls with windows in nine rooms.

Cloak-rooms are not kept clean. Basement not clean. Found improved by last examiner, January, 1898. Windows dirty.

Fire.— Fire escapes should be constructed immediately. This is a three-story building; stairs are steep, narrow; inflammable material in attic.

This building has one annex; a one-story frame building without cellar, containing two rooms. It has low ceiling, is overcrowded and inadequate. It has been occupied for six years.

SCHOOL No. 16. Delaware Avenue, near Bryant Street.

Building.— Seven rooms deficient in air space. Wraps hang in one hall. Basement pronounced bad. It needs to be cleaned out, and dug out, to be properly tiled and cemented. The timbers under the floor of the basement are likely to mold and decay, and will require replacement in a very few years unless this is done. The teachers and the pupils must breathe air impregnated with bad odors from this basement every day. This refers to basement under new part of building. The cellar under the old building is very dirty.

Sanitaries.— Closets pronounced good by man sent from Board of Health. Examiner reports that the closets are not properly cleaned or disinfected; that the plumbing is unsatisfactory; that the water used for flushing the urinal flies out, wetting the children and the floors.

Lighting.— In six rooms artificial lighting must sometimes be used.

Danger from Fire.— One hundred and thirty children are on the third floor of this building. The halls and stairways are not fire-proof. There are no fire-escapes and the front exit doors opened inwards until recently.

SCHOOL No. 17. Main Street, near Bouck Avenue.

Site.— Play-grounds need resurfacing.

Building.—Erected in 1885. A portion of the hall is used for classes. Every room deficient in air space. The basement gets

very little sun and there are unpleasant odors from the closets. Old and soiled paper on some of the walls.

Sanitaries.—Closets need cleaning and disinfecting. Bad odors from them. Seats without partitions or doors. Sewer seems too small to carry off waste. Wash-stand on second floor is unventilated.

Ventilation.—System insufficient and practically useless. Open windows largely used. The foul air outlets puff cold air into the rooms. Fan system is used; cost $3,596.

Light.—Insufficient on cloudy days in two rooms. Should be furnished with shades instead of the inside blinds now used.

SCHOOL No. 18. School Street and Fargo Avenue.

Site.—The play-ground is occupied partly by annexes and out-houses.

Building.—The rooms of this building are papered. The halls are dark and unventilated, and the air in them is bad. The entrance hall is used for a German class. In one grade room six or seven children are without desks.

Sanitaries.—The apparatus is old-fashioned and the seats are arranged along one side of the room, entirely unscreened one from the other.

Ventilation.—By doors and windows in old building; air bad. Fan system in new building; cost $6,317; not yet fully tested.

Light.—Black-boards are in the wall with windows in all rooms. These are not used so much as the boards on the other walls.

Danger from Fire.—The school has one stairway, which is quite broad, but neither it nor the halls are fire-proof. There are no fire-escapes. The furnace, fortunately, is at the back of the building, in the basement.

PASTEBOARD ANNEX.

This school has two annexes. One, a pasteboard annex, was built in 1887. It stands directly on the ground, and the floors are sometimes wet by absorption from the earth. It has four rooms, all deficient in air space, and all with more children than there are desks. The walls are papered, are tattered and shabby.

The children's wraps hang in a dark, unventilated hall, into which the class-rooms open. There is also a sink in this hall.

Sanitaries.—The children of the two annexes use an outhouse, which is 16 feet from this paste-board annex. It is often very dirty and odorous. Seats in it are not screened one from the other.

Heating.—Rooms often very cold.

Ventilation.—None. Described as "atrocious." There are ventilators in the ceiling through which the rain sometimes falls into the class-rooms.

Light.—Two rooms are dark on cloudy days. The building is overshadowed by the brick annex near by.

The janitor of these two annexes is reported as negligent and incompetent. Repeated complaints have failed to improve her work or secure her removal.

The use of the pasteboard annex will probably soon be discontinued, as the new main school building will be completed.

BRICK ANNEX.

This also stands in the yard of the main building. Two of the six rooms are deficient in air space. It has no cellar. The children's wraps hang in the entrance halls. Two of the rooms in this building contain sinks.

Heating.—This building is heated entirely by stoves. The stoves give off coal gas.

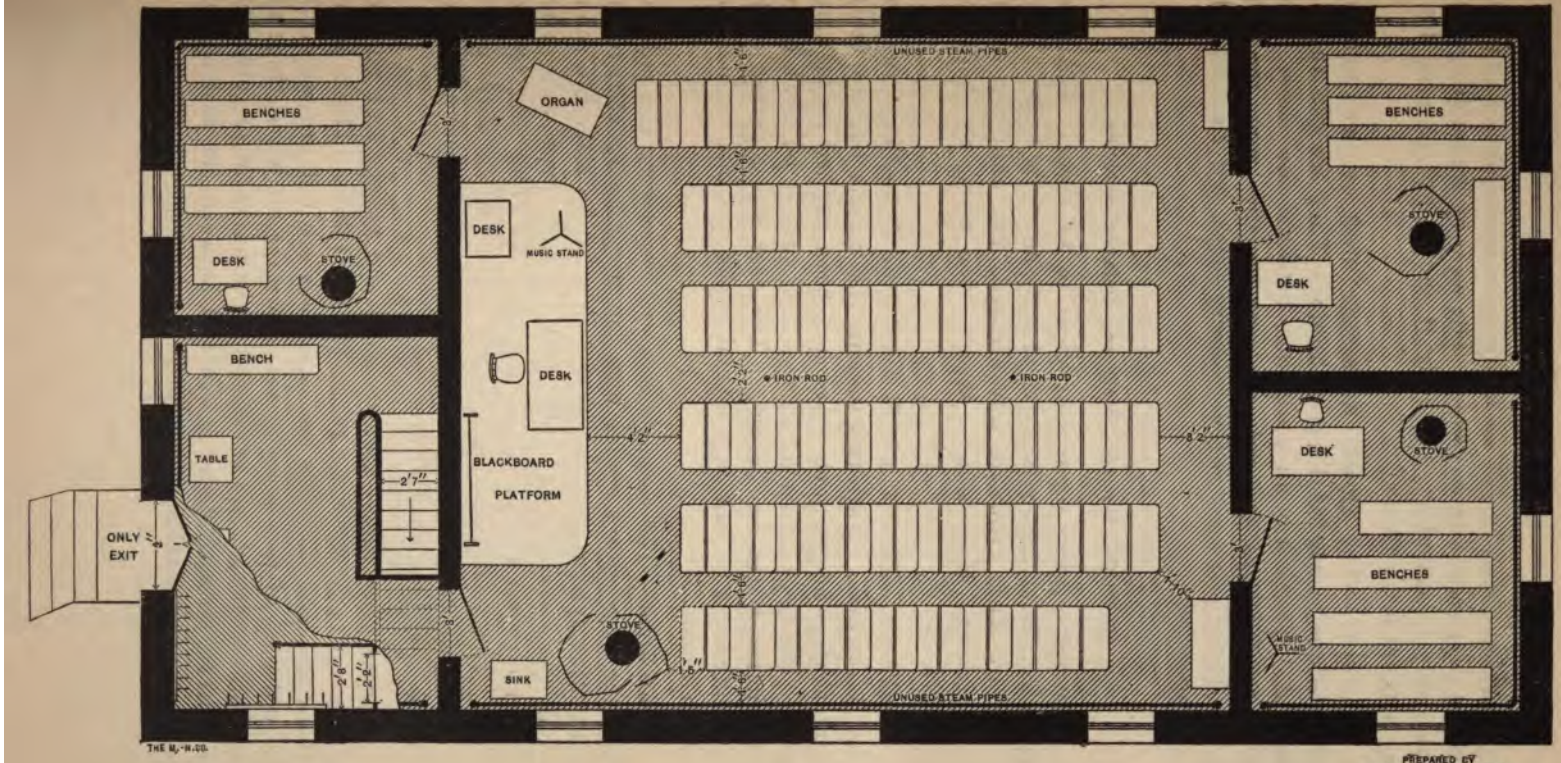
Ventilation.—Ventilation bad. No means of ventilating rooms except by windows.

Danger from Fire.—One hundred and fourteen children, six or seven years of age, occupy the second floor of this building. Their egress is by a flight of old wooden stairs, about three feet broad, and steep. This building has been described somewhat in detail in the portion of the report touching annexes, but as it will continue to be used even after the new one is completed, the opinion of another inspector regarding it is worthy of presentation. He says, "The danger from fire in this building is very great; hardly anything worse can be found in the city. The one narrow stairway to the second floor, where more than 100 children are assembled, turns at the middle on a cramped landing, and no one can look at it without shuddering at the thought of attempt-

SCHOOL No. 18.

Corner School St. and Fargo Ave.

On Second Floor about 98 Children, Average Attendance. — Ages 6 to 11 Years.



THE M.-H.CO.

PREPARED BY
CHARLES W. RICKER,
708 ELLICOTT SQUARE.

ing, in case of fire, to get so many little ones down its twisted passageway, 2 feet 8 inches wide. The walls of the building itself look ready to crumble. Certainly, it should not be used for a day without fire escapes."

Sanitaries.—The closets heretofore used by both annexes will continue in use for the brick annex. They are vile and disgraceful. There are no partitions between the seats. The entrances for boys and girls are near together, from the same yard. The whole place is foul to every sense, and cleanliness in it is impossible.

SCHOOL No. 19. West and Delavan Avenues.

Building.—Every room is deficient in air space. Ten extra rooms have been improvised out of sections of the halls. These rooms are dark, crowded, unventilated, and unfit for use as school-rooms. Halls small. Wraps hang along the halls and stairways.

Sanitaries.—Closets are ill-ventilated, ill-smelling, and too near class-rooms. Until this summer the closets had no ventilating shafts, though such relief had been applied for for three years. The boys' closet on second floor cannot be used, owing to deficient water for flushing. The fact was reported to the Superintendent of Buildings several weeks ago, but nothing has yet been done.

Ventilation.—The ventilation is still imperfect; the bad odor from the boys' closet comes into the neighboring class-rooms. Ventilation system does not work well. In the assembly rooms the air space averages 138 cubic feet for each pupil, and in the recitation-rooms the air space averages 112 cubic feet to each pupil. The recitation-rooms, which are crowded with pupils, have only window ventilation, excepting in one, where a two-inch crack is opened under an outer door.

Danger from Fire.—Two hundred and twenty-four children from 12 to 14 years of age are on the third floor. There are no fire-escapes, and the halls and stairways are not fire-proof. In the old part of the building the stairways are about three and one half feet broad, and are steep and worn. Fortunately, there is a broad, straight flight in the hall between the new and old portions of the building.

Desks.—The seats and desks on the second floor have been in use since the building was erected, 41 years ago. Many of them are cruelly low for the children using them.

ANNEXES.

This school has three annexes — two rented buildings, and a pasteboard annex. The school rents two rooms on Herkimer Street, which are occupied by 100 children. The cubic air space per child here is a scant 70 feet. There is no ventilation except by windows, and the rooms are heated by stoves. At Dewitt Street and Helen Place the school rents one room. The cubic air space per child is 60 cubic feet, with no ventilation, and a stove in the room. The children's wraps lie heaped up on the window-sills of this room. Seventy-two pupils are registered; there are 44 seats. This annex has been occupied one year and the other three.

The pasteboard annex stands in the corner between the old part of the main building and the addition, and, in consequence, gets very little sunshine.

Building.—It has no basement. Its four rooms are all deficient in air space. There are 66 more pupils in the building than there are desks, and the unventilated class-rooms all open into an unventilated hall. In this hall, which has but one window, are the children's wraps and a sink.

Heating.—The building is heated by stoves, which give off coal gas.

Ventilation.—Practically none, and the cubic air space per child ranges in the different rooms from 85 to 89 feet.

Light.—The wall of the main building is about four feet distant from the windows of one room. Children there must sometimes stop work because of insufficient light.

Sanitaries.—Children in this annex, and the one on Helen Place, must use the closets in the main building. This annex was built in 1890.

SCHOOL No. 20. Corner of Amherst and East Streets.

Site.—Play-ground for boys poor.

Building.—All of the rooms are deficient in air space.

Heating.— Some children sit too close to radiators.

Sanitaries.—There are no doors in the girls' closets. A bad odor from the boys' closet is complained of.

Ventilation.—Apparatus for ventilation was put into the building 12 years ago, but it has not worked satisfactorily and has been plugged up. The rooms have been ventilated by opening the windows from the top. The principal's study and library, and the German teacher's room are utterly inadequate. They are too small, are hot, stuffy and badly ventilated. Two rooms used as class-rooms are unsanitary, being long and narrow and having each but one window at the rear end.

Light.—An adjacent building so darkens one side of this school building as to render it necessary to light two or three of the rooms by gas nearly every day during the winter months. On the contrary, there is too much light in some of the other rooms and more shades are needed to protect the eyes of the children. In some rooms light comes from wrong side.

SCHOOL No. 21. Hertel Avenue, near Delaware.

Building.—A cheap, old, wooden, country school-house, through the clapboards of which the wind blows in winter to freeze the occupants, and the sun pours in summer to bake them. Its two rooms are both deficient in air space.

Sanitaries.—An old unwashed pan closet in a separate building in the rear. Partition three-fourths of the way up. Trouble about boys and girls talking across.

Heating.—Two stoves, which are very unsatisfactory. One changed last summer, but last one is second-hand and no better. The water-pipe and sink in corner of the larger school-room often freeze up, and are always coated with ice on winter mornings. One stove is dangerous, as large piece of fire-box is cracked and ready to fall out.

Ventilation.—Is by windows.

This is a country school which might well be closed for the next few years, until the district becomes more populated. The pupils could be transported by omnibus to No. 54 on Main Street, three-fifths of a mile, or about the same distance to No. 42, or to the new school to be built on Ontario Street. At the present time more pupils belonging to the district attend No. 54 or 51 than are registered in 21.

SCHOOL No. 22. Main Street, near Amherst.

Building.—Two of its rooms are deficient in air space. There is insufficient provision for the children's wraps. The floors of the basement are not always dry. Water comes in through the walls at the base. A trough cut in cement floor is needed.

SCHOOL No. 23. Delavan Avenue and Moselle Street, beyond Avenue A.

Site.—The land is neither naturally dry nor well underdrained; consequently, it retains moisture.

Building.—Two rooms are deficient in air space. This is one of the new schools built in 1896. Stands on ground bounded by three streets, with only about 16 feet on each side; hence no playground. As the country is open all about it thus far, the children can play in the open lots. Four hundred and eighty-four hours of carpenter work were required last fall to put the window casements in order. The casements had not been properly fitted into the walls, so that the cold air came in freely about them. The roof was so defective that it had to be fixed. The radiators were found also to be very poorly fitted together and had to be repaired.

Ventilation.—The fan-system of heating and ventilation utterly fails to provide fresh air for pupils, while cloak-rooms and play-rooms in basement have cold air pushed into them from the attic—so the janitor says. The cost of this apparatus was $8,237. Your committee recommend that the heating and ventilating apparatus of this building be investigated at once.

SCHOOL No. 24. Fillmore Avenue, near Genesee.

Building.—Very much over-crowded. The principal described the situation very well by saying that the building had two stories and they used four. One attic room, four basement rooms and a corner of the hall are used for classes. In six rooms there are more children than desks. Twelve of the 16 rooms intended for class-rooms are deficient in air space. The cubic air space in one basement room, where the daily attendance is from 90 to 120, is sometimes but 61 cubic feet per child. The basement rooms are poorly lighted, draughty and not well ventilated. They are occupied by 250 children of the tenderest years. One of these basement rooms has only a cement floor. Basement next to rooms was flooded when visited in January, 1898. Water trickles through basement walls in wet weather.

Sanitaries.—The closets have a rather antiquated system and insufficient water pressure. Closet seat in girls' lavatory can be seen from hall when all doors are open. No screen to closet.

Ventilation.—The ventilating system must be supplemented by open windows. The engine used for ventilating purposes is faulty. Belt broken, no money to repair, so not running January 20, 1898.

Light.—Is insufficient on cloudy days in four rooms, and in 13 the black-boards are in the same wall with windows, an unpardonable trial for eyes of children. Two of the basement rooms, which, it will be remembered, are occupied by kindergarten and first-grade children, are lighted by kerosene lamps, which swing from the ceilings. But one of the basement rooms gets sunshine, or, as a rule, abundant supply of light.

ANNEXES.

Last year this school had six annexes. This year it has but three,—one rented building and two directly opposite the main building, which are owned by the city.

The first of these annexes owned by the city is known as the "old building." It was built in 1857.

Building.—Its eight rooms are all deficient in air space. Its small halls are hung with the children's wraps. In two of the class-rooms and in one hall are sinks.

Sanitaries.—The closets are in an out-house 14 feet from the windows of this building. The odor from these closets sometimes necessitates closing the school-room windows nearest them. There are no partitions between the seats in this out-house, and in order that one stove may heat the entire building, the partition between the boys' and the girls' side is solid for about three quarters of the height of the room only; above that is a wire netting. Odor of sewer gas in entrance hall and class-room; or at least something like it.

Heating.—This annex is heated by stoves, and there is complaint of coal gas.

Ventilation.—Is by windows.

Danger from Fire.—One hundred and thirty children, six and seven years old, are on the second floor. They have one means of exit, — an old wooden staircase three feet seven inches wide, which curves at one place.

The pasteboard annex of No. 24, a one-story frame building, resting on the ground, is nine and a half feet from this two-story brick annex. In consequence, the rooms on that side of the pasteboard annex are dark. It is heated by stoves which give off abundant coal gas. The floors are cold in winter. There are drafts from under the doors. These drafts, together with the windows, afford the only ventilation. The four rooms, all of which are deficient in air space, open into a central hall, which is unventilated. It is the cloak-room of the school and the children's lunch-room. It contains a sink. The children from this annex use the same closet as those of the brick annex. Closets much too limited in number for the use of children in the two buildings. Children go to them through rain and storm, as they are unconnected with the building.

SCHUTZ BUILDING. ANNEX.

This is a frame building, intended for a saloon or grocery, and occupied partly by the family from whom the city rents it. It is as attractive as is usual with buildings of its class. Two rooms down stairs are used as class-rooms, and also two on the second floor. The one in the rear, 22 feet square and 11 high, is occupied by 53 children, is heated by a stove, and ventilated by the windows. A "store front" makes the side of the room, as the children are seated, and gives abundant light, though very little opportunity for fresh air. Ventilation must be by the transom over the door, and by a window 6.2 x 2.3½ on the opposite side of the room. This gives a direct draught upon the pupils. The stove gives out coal gas occasionally, and there is a bad odor from the cellar. Children are seated near the stove. The seats are all of the same size. There is no thermometer. The room is shabby, with badly marred wall paper and broken plaster. Behind this room is another, twelve feet square. It is used as a cloak-room, the wall being covered by the children's wraps; also, of late, it has been pressed into service as a recitation room, though it is not heated and contains no seats. There is one small black-board, and the children stand while the teacher conducts the recitation. The room is dirty, but we see the reason for using it when we go into the other class-room on this floor. This is the front room, facing on Fillmore Avenue. It also has a "store front," which is practically its only source of light. There are, besides, a couple of windows 2½ feet square,

near the ceiling on the side wall, which are intended for ventilation. This room is 24.10 x 42.11 and 11 feet high. It contains two coal stoves, the desks of two teachers, and 104 desks for pupils. The registration is 116 and the average attendance 110. The extra pupils are seated on the benches in front of the desks. The seats are all of the same size, and children are very near one of the stoves. There is no thermometer. There is no ventilation. At the time of examiner's visit, with 112 persons in the room, not a window was open. When they are open there is an uncomfortable draught, so that, in the opinion of the teacher, it is better to keep them closed. By way of compensation, they have plenty of coal gas and a bad odor from the cellar. The room is poorly lighted, and has no provision for artificial lighting; one portion of it is certainly too dark for use as a school-room, even on a fairly bright day. The room was shabby and badly cared for. There is complaint that the janitor, a woman, does not clean the rooms. If the teachers do not themselves dust off the desks in the morning, the children do it, incidentally, with their sleeves. There were two teachers in this room, and two recitations, involving all of the children in the room, were being conducted at the same time at the top of all voices concerned. This goes on all day, except when a group of children are led off to the quiet of the unheated cloak-room in the rear. Upstairs are two class-rooms, both with coal stoves and window ventilation. Neither has adjustable seats and neither has a thermometer. In both rooms there is complaint of bad odors. In the front room it comes from a cupboard, and is supposed to be sewer gas. It is said that the health officer, who inspected the building, recently, agrees that there is a bad odor, but can't tell from what it comes. The odor complained of in the second room, the rear one, is supposed to come from the girls' water closet, which is at the foot of the stairs. This is a tiny room, such as one finds in small houses, with one seat, and is used by 120 girls. It is used by the family also. The odor from it is said to be very bad at times. Mingled with it is the odor from the children's wraps, which line the narrow halls, and that from the rooms occupied by the family in the building. This last is the familiar tenement-house smell. The cellar is damp, musty, and ill-smelling; the plaster is broken, the walls are disfigured, there are little piles of dirt in the corner of the halls and on each step of the staircase, and the girls' water closet was littered with scrubbing

cloths and brushes. The janitor is evidently very inefficient. The boys' closet is at the further end of the stable, which is at the rear of this house. The examiner describes it as follows: "A dirty room, 8x4 feet, with a trough for urinal, through which no water runs; two rusty iron funnels for closets, through which water seldom runs, and three heaps of fœcal matter on the floor."

The two upper rooms in this building have been occupied for four years this May, and the lower floor for four years from next October. The rental paid by the city is $1,200. The filthy, "shiftless" state of this annex makes it, in its moral effect on the children, one of the worst in the city.

It is evident that the sanitary conditions of School 24, including these annexes, are bad. The city owns at the southeast corner of Fillmore Avenue and Best Street a lot, 92 x 150 feet, which is now encumbered by coal-sheds and two disreputable annexes. These could be removed and a suitable building there erected. During the last four years the bad condition of school 24 has been reported to the Bureau of Public Works by the Board of School Examiners and by the principal of the school.

SCHOOL No. 25. Lewis Street, near Howard Street.

Site.—Several stables in the neighborhood. Play-ground wet.

Building.—All rooms but one are papered. In one the seats are very old, poor and unsatisfactory. Many children are unable to reach the floor with their feet when seated. These seats should be replaced by better ones without delay. Should be a few adjustable seats at least. Lower grade rooms crowded. Water enters boys' basement.

Ventilation.—Unsatisfactory. In one room very poor. No fan in building.

Sanitaries.—Towels are used in this school. Three supplied daily for the 375 children who attend.

Danger from Fire.—Fire escapes are advised for this building.

SCHOOL No. 26. Milton Street, corner Wescott Street, near Seneca.

Site.—The soil is largely clay. Only one of the neighboring streets has a sewer. Naturally it takes several days to "dry surface." Drainage necessary.

Building.—Erected in 1889. Three extra rooms have been added this year to the number originally built for class rooms. Two have low ceilings and one only moderately good light. Sixteen of the 18 rooms are deficient in air space, and six rooms nearly reach requirement.

Sanitaries.—Should have partitions between seats for sake of privacy; at present they are most objectionable; cannot be kept in sanitary condition, and have no actual ventilation.

Heating.—Not known when the boiler was inspected.

Ventilation.—Poor. Ventilating system seems practically perfect, but little use is made of it. The system — fan — cost $7,541.

Danger from Fire.—Requisition for fire escapes has been made.

SCHOOL No. 27. Mineral Spring Road, near Seneca Street.

Building.—All but three of the class-rooms deficient in air space. Basement recently flooded, putting out fire in furnace; two feet of water.

Sanitaries.—Towels are used, one for about 150 pupils. Changed "when soiled."

SCHOOL No. 28. Abbott Road, corner Triangle Street.

Building.—All rooms deficient in air space. They have an average of only about two thirds of the required amount. Rooms on lower floor papered. Basement very dark.

Sanitaries.—Flush not working in boys' closet in basement.

Ventilation.—Poor.

Danger from Fire.—On the second floor there are about 150 children from 11 to 16 years of age. One flight of stairs affords the only exit. Children on this floor would be in great danger in case of fire.

SCHOOL No. 29. South Park Avenue, near Marilla Street, Abbott Road.

Site.—In the open country. Rather marshy in spring.

Building.—Has two rooms, both deficient in air space. It has no cellar. The children's wraps hang in the hall. The walls of the class-rooms are papered. Paper hangs loose from ceiling in one room.

Sanitaries.—The closets are outside in the yard. There is no sewer in this part of the street.

Heating.—The building is heated by stoves.

Ventilation.—Ventilated by windows.

SCHOOL No. 30. Louisiana and South Streets.

Site.—South Street, between Louisiana and Ohio streets, is not paved. Neighborhood is noisy, on account of traffic.

Building.—The hall is occasionally used for a recitation-room. Walls are papered.

Ventilation.—Poor. System is correct, but does not work. Fan not used at present, as it accomplishes practically nothing. In attic rooms ventilation only by windows.

SCHOOL No. 31. Emslie Street, near Peckham.

Site.—Play-ground needs more gravel.

Building.—About 75 children are without desks in winter. Not so many in spring and fall. Wraps of some of the children are hung in the halls. Thirty-two rooms deficient in air space, not including small recitation-rooms.

Sanitaries.—Floor of the boys' closet in bad condition, as the stone of which it is made absorbs moisture. Part of floor slopes wrong way.

Ventilation.—Very imperfect in wings of building. Sixteen rooms have only window ventilation.

Danger from Fire.—In this building the danger from fire was so great last year that special attention was called to it by the School Association last spring. Fire-escapes have been ordered.

SCHOOL No. 32. Cedar Street, near William.

Building.—Every room deficient in air space. Average 163 cubic feet. Rooms are papered.

Sanitaries.—A trough with 13 seats for boys, 11 for girls. No regular inspection of plumbing. Arrangements on the whole are poor and offensive.

Ventilation.—Works well, but windows are used to assist. Many complaints of odors in hall.

Danger from Fire.—Fire-escapes advisable.

The desks are old and poor, and, of course, not adjustable. In one room the desks are too small for the pupils, in another too large. In another neither strong nor wide enough.

ANNEX.

This school has one annex — the old school-house.

Building.—It has three assembly rooms and nine recitation rooms. The three large rooms are all deficient in air space. The cloak-rooms are too small. The rooms are all papered. One class-room is divided into two by black-boards.

Ventilation.—Halls ventilated by windows. The rarefaction system in use is worthless.

Danger from Fire.—Fire-escapes are in the rear of the building in a brick tower. Stairs of this fire-escape are not fire-proof.

The second floor was supplied with new desks last summer. Most of them are a little too high for the pupils.

SCHOOL No. 33. Elk Street, near Euclid Place.

Site.—Stagnant pools in the immediate neighborhood.

Building.—Fourteen of the twenty rooms are deficient in air space.

Sanitaries.—The closets for the pupils are all exposed,— that is, without doors or partitions. They are pronounced not proper for the use of school children. These closets have been in use nine years. It is also recommended that the apparatus in the closets for the teachers should be replaced by more modern arrangements.

Heating and Ventilating.—Ventilating and heating apparatus needs some improvement. Ventilating flues found closed by dampers. No means provided to show janitor whether dampers are closed or open. Mouths of open air ducts defective. Boiler of engine for revolving fan leaky and useless. Registers not properly regulated. Cost of fan system of heating and ventilation here used was $9,500.

Light.—Is insufficient on cloudy days in four rooms. Gas needed.

ANNEX.

This building has one annex of the pasteboard variety.

Heating.—It has four rooms, heated by stoves, which cannot be regulated, causing much trouble and ill-health both among scholars and teachers.

Light.—One room in this annex has insufficient light on cloudy days, with no means for artificial lighting.

Ventilation.—From a hole in ceiling.

This annex pronounced "bad in every way."

SCHOOL No. 34. Hamburg Street, corner Sandusky Street.

Site.—Neighboring streets insufficiently clean, although defect is not serious.

Building.—Half the rooms are deficient in air space.

Sanitaries.—Closets in fair condition. Towels are furnished for use of pupils.

Ventilation.—System of ventilation is wrongly constructed. The ventilating shafts open into attic on a level with the floor. The attic is large, and in one part of it is a cupola in which the fan revolves; this cupola has several outside openings, both above and below the fan; consequently the fan can do practically nothing toward ventilating the building. Cost of this fan system of heating and ventilating was $8,393.

SCHOOL No. 35. Swan Street, near Spring.

Building.—The hall is used as an extra class-room. It is poorly lighted and badly ventilated. Rooms deficient in air space. Halls fairly clean. Boys' coats and hats hang in the halls. Walls are papered. Basement low, dark, with many partitions.

Sanitaries.—Wooden floor. Closets foul. Not ventilated to roof.

Ventilation.—Outside air enters through open doors and windows only. Some flues were put into the building when steam heating was introduced, some three years ago, but they do not work well; better ventilation needed.

Light.—Is insufficient in all three of the large assembly rooms on cloudy days. Artificial light is used in these rooms from two to four hours daily from November to March.

SCHOOL No. 36. Day's Park, near Cottage Street.

Building.—One end of a hall is used for a class-room. The twelve rooms built for class-rooms are all deficient in air space. Twenty-one pupils are without desks. A few cloak rooms ventilate into the class-rooms. Others have a small slit in the wall intended for ventilation, but it cannot ventilate. At times the wraps, when wet, give annoyance by their odor. Walls are papered.

Sanitaries.—Closets, long trough with fourteen seats. Air more pungent than should be. No doors, but there are partitions.

Heating.—One air box for indirect radiation of the heat was until recently supplied through window in boys' closet, so that all registers thus supplied had to be kept closed. But now air is taken in from a window in coal room. As there are holes in the air boxes it is evident that air is often taken in from the basement itself.

Ventilation.—Windows mainly depended upon. Unpleasant odors in three rooms at times. Ventilation, when supplemented by open windows, is in the main good, but in three rooms even with the windows always open at the top, the air is very close.

Light.—Is insufficient on cloudy days in three rooms. Blackboards, which are much in use, are in the wall with windows in seven rooms.

Seats.—Pupils are too near radiators in two rooms. In first and second grade rooms the seats are too high for many of the pupils, whose feet do not touch the floor.

SCHOOL No. 37. At Peach and Carlton Streets.

Building.—End of upper hall is used for class-room. In three rooms there are more pupils than desks. Twenty-five of the 28 rooms are deficient in air space. Halls and class-rooms are papered. There are two set wash bowls in the lower hall, and it is so dark that two gas jets are kept burning there. The children's wraps hang on the walls in the upper hall and in four class-rooms. The basement is in good condition, except as the closets call for criticism. Surface water runs into boiler room ; this room is below level of sewer.

Sanitaries.—The closets for the pupils are in the basement — those for the teachers at the end of cloak-rooms. These basement rooms have very little light and no ventilation whatever. The flues that were built to conduct the air from those rooms open into the grade-rooms and in the room above. At times it was necessary to dismiss the pupils on account of the nausea brought on by this foul air. The main traps are buried and cemented over. The bad odor from the boys' closet is at times noticeable through the halls even to the second story of the building. Rather dark in girls' closet. Privacy is insured, especially in boys' closet, by the darkness, as in some portions of the room where these closets are placed it is impossible to distinguish what is before one.

Ventilation.—Until this year the system of ventilation was practically useless, and the air throughout the building was bad. There were many complaints of headache, drowsiness and defective power of attention due to the bad air. Relief had been asked for many times, but only this summer has this school been provided with what is hoped will prove an adequate system of ventilation. It is, however, not yet in full running order (January 22, '98). The horizontal pipe in boys' closet, which is depended upon for ventilation, shows a complete lack of knowledge of the principles of ventilation. Cost of fan system, $7,077.62.

Heating.—The building is generally well warmed, but one room can with difficulty be heated to 60° on cold days. But new heating plant just put in.

Lighting.—In three rooms the light is insufficient on dark days. Work stopped on such days — resort to oral methods.

Overcrowding.—This school is very crowded. Some rooms are so crowded that desks with children are almost in contact with the steam-pipes. In others two children must occupy a single seat or three a double one, while still others sit on the teacher's platform. The ends of the upper hall are partitioned off for class use. They are entirely unsuitable and should be abandoned. This school is in great need also of provision for the children's wraps. Masses of clothing, often wet, hang in the halls, diffusing odors throughout the building, while in four rooms, as stated, the children's wraps are hung on the walls underneath the black-boards. These rooms are so filled with children that those in the seats nearest the walls must sit almost

in contact with these wraps. In winter water-proofs, umbrellas, etc., must also lie on the floors. It is a condition which a proper regard for school hygiene would not allow for a day. Principal has asked to hang children's wraps in lower hall instead of class rooms. Denied by inspector of buildings.

SCHOOL No. 38. Vermont Street, corner Lowell Place.

Site.—No play-grounds, except a small court entirely enclosed by the school building.

Building.—Large addition erected in 1896; original part in 1886. Every room but one deficient in air space. Old part of this building has papered walls.

Sanitaries.—Almost no ventilation in boys' closets, except by opening a window; air bad, with offensive odor. There are partitions between the seats in the girls' closets, but no doors; the same is true of the boys' closets.

Ventilation.—The wheel is too small and the air flues are too few. The ventilation in the old building is much more satisfactory than that in the new part. In the latter the foul-air outlets in the school-rooms connect with flues which open into a large attic. A fan in the roof of the latter is expected to expel air from it in sufficient quantities to produce a draught through these flues. As a matter of fact more air undoubtedly comes into the attic around its numerous windows and through the many cracks of a carelessly built, unplastered, big top loft, than the fan drives out; and not enough draught is found at the opening of the flues to move a handkerchief. The cost of the apparatus for heating and ventilating was $3,441. In addition to this, the city is at the expense of running an engine for the driving of this fan wheel. On the whole, the "system" is simply laughable.

In the old building the fan is placed in a small, well-sealed room in the attic, into which the outlet flues open. The result is a positively strong draught through the flues and some undoubted ventilation in the school-rooms, though it is probably inadequate.

Light.—Two rooms have insufficient light on cloudy days. In four rooms the light is too bright. These rooms are furnished with inside blinds, which, when closed, make the rooms too dark. They should be supplied with shades instead.

SCHOOL No. 39. High Street, near Gray.

Building.—Part of hall is used as class-room. Every room but one deficient in air space. In five rooms there are more pupils than desks. The halls in the old part of the building are not ventilated.

Sanitaries.—Some old-fashioned pan closets are used in the old building. On the other hand, the one closet for girls in the old building is excellent. Seats there are completely screened. Roller-towels are used in this school — one daily for 138 pupils and changed "as often as soiled" — once or twice a week.

Ventilation.—System is said to work well, but several rooms are reported as close and stuffy, and in seven rooms windows are kept open constantly at the top.

Light.—One room has insufficient light on cloudy days. In one room only a small portion of the black-board can be used, as the light so falls that the pupils cannot see what is on it.

SCHOOL No. 40. Oneida Street, near Fillmore Avenue.

Site.—Soil retains moisture after rain. Play-grounds are usually in bad condition; should be graveled.

Building.—Erected in 1887. Five extra rooms in the attic are used. The play-rooms in the basement are not well ventilated.

Sanitaries.—General condition poor. Teachers' closets insufficiently flushed.

Heating.—Steam-pipes have been carried through lower rooms to heat recently constructed rooms on third floor, with the result that one of the lower rooms is over-heated while the new rooms are not warm enough in cold weather.

Ventilation.—System does not give satisfaction. Windows are, as a rule open, but the windows in the attic halls are immovable and give no relief from heat, or bad air. These five new attic rooms have no ventilation.

Light.—Is insufficient on cloudy days in three rooms. The light is too bright in two rooms. Black-boards are in the walls between windows in two rooms.

SCHOOL No. 41. Broadway, corner Spring Street.

Site.—Soil not well underdrained and retains moisture after rain. Needs more gravel. A malt-house, distillery, and the Buffalo Forge Works are in the neighborhood. Two extra rooms, the principal's office, and the end of the hall, are used as class-rooms. Every room is deficient in air space. One hundred and twenty-four children are without desks. Some of the rooms are very crowded. Walls of the main building are papered.

Heating.—By stoves.

Ventilation.—By doors and windows.

Light.—Insufficient on cloudy days in four rooms.

Danger from Fire.—There are no fire-escapes, and the hall is obstructed by desks, tables and recitation seats which might make difficulty in case of fire.

This school has an annex of the pasteboard variety. These buildings of the pasteboard variety resemble each other so closely that it is not necessary to describe this one in detail.

SCHOOL No. 42. Military Road, near Clay Street.

Site.—No play-ground for boys, the original space having been filled by the annex. The boys play in the street.

Building.—All six rooms deficient in air space. The wraps hang in the halls.

Sanitaries.—New closets were built during the summer. They are furnished with a trough which is flushed every ten minutes. There are no doors for any of the closets. Closet for boys out of order. Plumbers were at work at time of visit, January 24, '98. No partition between doors leading to boys' and girls' closets.

Heating.—There is no provision for evaporation of water in connection with the hot air furnace. One room over-crowded.

This building has a pasteboard annex of four rooms. In two of its rooms light is insufficient on cloudy days. No artificial light. Resort to oral work on cloudy days.

SCHOOL No. 43. Lovejoy Street, near Benzinger Street.

Building.—Eight of the 10 rooms are deficient in air space. The basement is dark. This school and its pasteboard annex were both over-crowded at the beginning of the year. This has

been relieved in a measure by the opening of a rented annex in connection with this school. There are also more children than desks, but the number varies daily. The walls of this building are papered.

Sanitaries.—The closets in the main building serve the children in the pasteboard annex as well. Their condition is fair, but the flow of water is insufficient. Last year the proportion was 47 pupils per seat; that proportion is now greater, as two seats were removed during the summer, leaving now 14 seats for 923 children.

Ventilation.—Poor in nearly every room.

Light.—Is insufficient on cloudy days in two rooms. Blackboards are in the walls with windows in two of the rooms.

Towels are furnished the children — one for a hundred children.

ANNEXES.

This school has a pasteboard annex in the yard with the main building. It has six rooms, and the hall also is used as a classroom. All are deficient in air space. All rooms are over-crowded and poorly ventilated. Heat in warm weather intense; should have awnings on some windows.

Heating.—The building is heated by stoves, and the exposed rooms cannot be kept warm in cold weather.

Sanitaries.—As the children in this annex must use the closet in the main building, they are obliged to go out in all kinds of weather to reach the main building.

This annex is most strongly condemned by the examiner, as unfit to be occupied as a school. Its condition demands immediate reform. Both the annex and the school building are greatly over-crowded. It must not be forgotten that a rented annex also has been found necessary this year. A new and hygienic school building should be furnished to this district at once, the pasteboard annex torn down, and the defects of the main building remedied.

SCHOOL No. 44. East Broadway, corner Person Street.

Building.—The janitor's store-room in this building is used for German class. One small room on the third floor, used for the German recitations, has no ventilation, and very poor light.

It should be vacated without delay or thoroughly remodeled. All five rooms on first floor are under requirement in regard to air space. Three on second floor are lacking in air space. Two on third floor. Though this building was built but two years ago it is already overcrowded, and has a pasteboard annex this year.

SCHOOL No. 45. Auburn Avenue, corner of Baynes.

Building.—Two basement rooms, one room on the third floor, and the library over the principal's office, have been pressed into service as class-rooms. One hundred and eight primary grade children occupy the basement rooms. Basement and attic in bad condition.

Sanitaries.—There are partitions in the closets, but they have no doors.

SCHOOL No. 46. Edward Street, corner Virginia Street.

Building.—Constructed in 1889.

Ventilation.—Not altogether satisfactory. Two of the cloak-rooms have only window ventilation. Rooms cannot be kept at the right temperature or properly aired without opening windows. This dependence on windows is constant. The cost of the heating and ventilating apparatus—the fan system—was $5,644.

SCHOOL No. 47. Hickory Street, near Sycamore Street.

Site.—Soil retains moisture after rain. Shoe factory in immediate vicinity is a great detriment to the school. The dust pipe from this factory throws dust by steam pressure right into the school yard. This is a serious nuisance and should be prevented. The noise made by the fan in the factory is also a serious nuisance, although recently slightly abated.

Building.—Every room but one is deficient in air space. One room in basement is small and imperfectly lighted and should be closed as soon as possible.

Fire Escapes.—Should have fire escapes from the two grade rooms on third floor.

SCHOOL No. 48. Edna Place, near Masten Street.

Site.—Play-grounds small, children play in street.

Building.—Rooms all deficient in air space. Primary grades over-crowded as to seats.

Sanitaries.—Fifteen or twenty seats, screened in no way from each other, are over a long trough.

Ventilation.—One of the two outlets in each room is kept closed, and window ventilation used a great deal. Building constructed in 1892. Cost of fan system here installed $7,280.

Light.—In 10 out of 16 grade rooms the light is insufficient on cloudy days. In three of these rooms artificial light must be used every other day. Blackboards are in the walls with windows, in four rooms.

Danger from Fire.—The school has two stairways, one on either side of the building. They are not very wide and neither is fire-proof.

SCHOOL No. 49. Fargo Avenue, corner Vermont Street.

Site.—Has no play-ground.

Building.—This building is almost new, having been constructed in 1892. Five extra rooms are used as class-rooms. Three of these rooms are in the attic, one in the basement, and one was a lavatory. The attic rooms have poor light and no ventilation. There are over 100 pupils in these three attic rooms, and they are denied even window ventilation. The windows are sealed up in winter by storm sashes, which have not even a hinged pane of glass in them to be opened. A few auger-holes in the bottom rails of these sashes admit the only fresh air that can be supplied. There are two narrow stairways to the attic, but the doors admitting to one of them are sometimes locked. The place is not safe for so many children. Every room but one is deficient in air space. Some are very deficient. From 9 to 15 pupils are now without desks. The basement room is filled with 45 of the smallest children.

Sanitaries.—The girls' closet is in good condition, but there are no partitions between the seats. The boys' closet is filthy and fouls the air of the whole basement. The floor slants toward the hall, and hence it cannot be flushed. But it is not cleaned at all as it might be. Although this is a new building, and there is a fan system of heating and ventilation in it, no arrangement was ever made to connect this closet with the ventilating apparatus; consequently, it is ventilated in warm weather by windows, but in winter these must be closed, since the pipes would otherwise freeze.

and windows have to be open. The engine for running fan was removed last summer. Building was constructed in 1895. Cost of fan system for heating and ventilation was $5,932.64.

Danger from Fire.—Fire-escapes are considered desirable.

SCHOOL No. 55. Guilford Street, near Sycamore.

Building.—Play-ground very small; children play in street; vacant lot next to school. Three basement rooms are used in addition to those originally intended for classes. Every room deficient in air space. The average is 183 cubic feet for each pupil, instead of the minimum requirement of 250. The highest proportion is 225 and the lowest 166 cubic feet. This last is in a kindergarten room.

Sanitaries.—Closets are good but too small, as the proportion is 83 pupils per seat. The seats are divided by partitions, but have no doors. There is a sink at the end of the third story hall.

Ventilation.—The system seems insufficient, as in every room it must be supplemented by open windows. Six rooms are reported as stuffy and there is much complaint of cold drafts from the foul air out-let. Building constructed in 1895. Cost of heating and ventilating apparatus — fan system — was $5,166.25.

Light.—Is insufficient in two basement rooms on cloudy days. Children face the light in four rooms. The arrangement of desks in these rooms has been reported both by principal and Board of Examiners, without effect.

SCHOOL No. 56. Elmwood Avenue, near Ferry Street.

At this school, which was completed in 1896, it has already been found necessary to use the teacher's cloak-room for classes. Three of the 16 regular class-rooms fall slightly below the standard in air space.

Sanitaries.—Water supply on third floor insufficient. Water used for flushing urinals flies out, wetting children and the floors.

Ventilation.—An expert examiner concludes a report on the ventilation of this school as follows: "As the system now stands, it is impossible to maintain an even temperature, and the time of the Principal is largely taken up in the vain effort to

obtain the temperature regulation which the apparatus should automatically give."

Examiner reports that under certain conditions it might be impossible to get the teachers and children out of school in case of fire.

SCHOOL No. 57. Sears Street, near Broadway.

This building was first used for school purposes September, 1897. The registration is already 1,037. The lot purchased for this school is entirely too small, although land in that section is cheap. On one side a building has already been built close up to the line. It would be good policy in purchasing land for school buildings to get enough to secure light, air and reasonable quiet to the school in future years.

Ventilation.—Ventilating shaft for the closets does not work well. Amount paid for heating and ventilating apparatus was $8,757.

SCHOOL No. 58. Rother Avenue, near Walden Avenue.

Site.—Here again the lot is too small, though land is cheap and there is an abundance of it vacant in this vicinity.

Building.—Water leaks through about 40 per cent. of the basement walls when it rains.

Sanitaries.—The water pressure is insufficient to take water to the third story. There are no doors in front of the closets for the children.

This school, which was opened in September, 1897, has already a registration greater than its seating capacity.

KENSINGTON SCHOOL. Richlawn and Shawnee Avenues.

Building.—This is a rented building. It is a cheap wooden house containing five good-sized rooms. Owing to the dearth of pupils but two of these rooms are utilized for classes. The city pays for it a yearly rental of $250, and has occupied it for three years. The average attendance is 49. The whole expenditure for this school in 1896, independent of teachers' salaries, was $354.41, a per capita cost of $7.23. The per capita cost for children in city buildings is $2.04 per pupil.

Heating and Ventilating.—The building is heated by stoves and ventilated by opening the windows. Coal gas abundant.